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## NEW GRAIN ELEVATOR AT FOWLER, IND.

A new modern elevator has recently been completed at Fowler, the county seat of Benton County, Indiana, on the line of the Chicago, Indianapolis & St. Louis Railway. Benton County is on the Illinois line, and not far from Chicago. This elevator was planned and built by the B. S. Constant Co. of Bloomington, Ill., after their plan of elevator construction, C. E. Flora superintending the work. Elevators built on the Constant system have deep storage bins as well as hanging bins. It is claimed that this style of construction gives large storage capacity with small floor space. The elevator of O. Barnard & Son, which is illustrated herewith, has storage capacity for about 16,000 bushels of ear corn, and 54,000 bushels of shelled corn. By using dust rooms and basement when crowded, room for about 20,000 bushels more could be secured. The dust and cob rooms have been provided with hopper bottoms so that they can be used for storage when needed.

The machinery is adapted for handling all kinds of grain, both shelled and ear corn. The deep storage can all be used for ear corn if desired, without the additional cost of machinery to put it in and take it out to the sheller. A corn crib is

built in connection with the deep storage bins, the difference being in the walls of the crib, which are slotted to let the air pass through the corn.

This elevator has two rows of bins and cribs 12 feet wide, which are next to the track, and a row over the driveway, besides the dust and cob house, outside of the driveway, that are hopped, and have trap doors so that the dust and cobs can be dropped into a wagon in the driveway beneath. There are three bins over the main driveway 12x14 and 32 feet deep, and one overhanging bin 12x14 and 32 feet deep, next to engine room and driveway.

Between this bin and the railroad and next to the engine room is a 1,000-bushel scale. Above this scale is a shipping bin 12x14 and 14 feet deep. The scale beam and lever for opening the slide to the scale hopper and the shipping bin, are on the working floor under the scale, which is on a level with the main driveway.

The working floor is 18x24 feet. Next to the work-

stant Elevator Boot Feeder that feeds the grain into any one of the three stands of elevators; have a 16-inch belt and 7x15-inch buckets. In the elevator heads are elevator cleaners that are connected to a suction fan which collects the dust and chaff from oats and the loose silks, shucks and snow from ear corn.

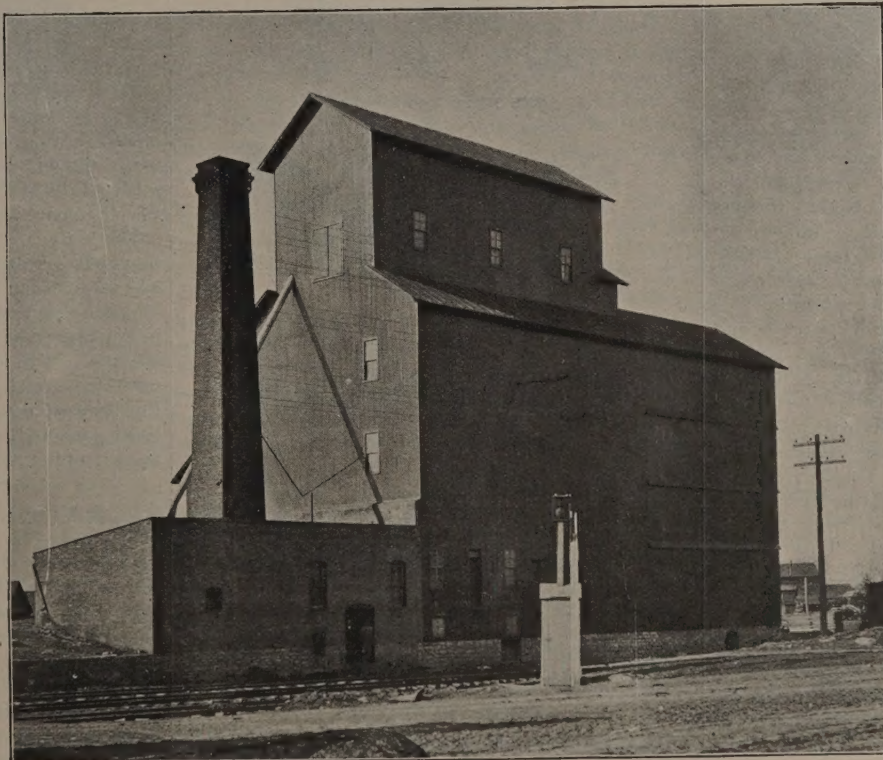
The grain is distributed to any part of the house from the elevators, therefore any kind of grain can be put in either dump. In the hallway between the deep storage bins and cribs is one of the Constant Self-Feeders, that runs the full length and feeds a Barnard & Leas Corn Sheller, with a capacity of 1,400 bushels per hour, or the oats and shelled corn to the elevators. The power is transmitted by ropes to the sheller or cupola line shaft.

In addition to the sheller and cleaner the house contains one Eureka Clipper and Cleaner. The plant and equipment cost nearly \$13,000. It is said to be one of the most complete country houses recently erected, and so conveniently arranged that grain can be handled very economically.

## SHIPMENTS TO STATE POINTS.

The recent decision of the United States Supreme Court on an important Pennsylvania case, involving the application of the Interstate Commerce law to freight

charges on goods shipped from point to point in the same state, which in transit pass through a second state, has disposed of a number of similar actions in Northwestern Iowa. For several years there has been litigation over the charges made by the Milwaukee road on goods shipped from Sioux City to Akron, Hawarden and other points in the same neighborhood. On the ground that the road passed a part of the way through South Dakota, the company has insisted that it had the right to make its charges under Interstate rules. The shippers maintained that as the shipments started in Iowa and



NEW GRAIN ELEVATOR AT FOWLER, IND.

ing floor is the deep storage department with the floor sloped to the center. It has four bins 12x14 and 44 feet deep, and six cribs 12x12 and 44 feet deep. The center partition, running lengthwise between these bins and cribs is a pyramidal shaped passageway, the bottom of which is 4 feet wide. The sides slope in and come together 10 feet above the floor. From this hallway air is admitted to the bins.

There are three platform dumps in the driveway with sinks 10x14 and 14 feet deep, hopped from each end to the center, and each has in it a Con-



ended in the same state the charges were subject to state regulation, which would make them considerably lower. This view having been sustained by the Supreme Court, the road has settled the cases by paying back all money claimed as over-charge, and will in future make its charges in accordance with the Iowa law.

### INSECTS INJURIOUS TO STORED GRAIN.—III.

BY PROF. W. G. JOHNSON, CHAMPAIGN, ILL.

The first article of this series was on the grain moth, *Gelechia cerealella*, and appeared in the September (1895) number of this journal; the second article, on the grain weevils, *Calandra granaria* and *C. oryza*, was published in the December number. It is my purpose to treat, in the present article, some of the moths or millers, as they are more often called by the ordinary observer, that are more or less injurious to stored grains.

The Indian-meal moth, *Plodia interpunctella*, has a wide distribution, and is a very destructive and annoying pest. It does not confine its attacks to grains and farinaceous products, but feeds on seeds and various kinds of nuts, dried fruits, roots and herbs. Even dried insects in cabinets are not free from its attacks. It will also feed upon sugar, jelly, and yeast cakes, and has been found troublesome in bee hives. It is an all-around nuisance in granaries, stores, and in the house.

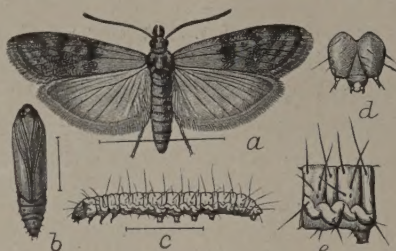
The adult moth is shown in the accompanying illustration at a. It measures from a half to three-quarters of an inch, with wings expanded. The outer two-thirds of the fore wings is reddish brown, with a dull coppery luster, and the inner third is a dirty whitish gray. The moths are quite active, and are easily disturbed. They may be seen flying about a granary or warehouse in the daytime, but they are usually more active at night. The female may often be seen resting, her wings drawn close to her body with the tip of her abdomen turned upward between them, in which position she remains unless disturbed, until found by the male. The female deposits her eggs upon the grain, where they hatch in a few days into tiny worms which eat their way into the kernels. When full grown the worms or larvae are about half an inch long, flesh-colored, and hairy as shown in the illustration at c. They have the peculiar habit of spinning fine silken threads wherever they go, in much the same manner as the flour moth. When fully grown the larvae usually leave their food, and crawl to some isolated angle or corner to pupate. They are exceedingly free with their silk during this migratory period, and will often line the inside of tightly closed bins or granaries with this waste material, trailing it back and forth in every conceivable direction, forming a fabric as fine and delicate as the most costly silk cloth. Larvae in my glass cylinder breeding cages so completely line the interior with silk I find it difficult to see what is going on within. During very warm weather and under favorable conditions this insect is capable of passing through all its stages, from egg to adult, in about five weeks. There are, in all probability, from five to seven generations annually where the temperature is favorable.

Another little moth which is attracting considerable attention in this country is the meal snout-moth, *Pyrallis farinalis*. It has been known in Europe for a long time as a domestic nuisance; but not until recent years have we heard much about it in the United States. It usually occurs in mills, granaries, storehouses, barns and other houses where farinaceous products are stored.

The adult moth is a beautifully banded creature with a wing expanse of about an inch. The ground color is light brown, with reddish reflections. The wavy, transverse lines of the wings are whitish, and form the pattern indicated in the illustration. The larva is about three-quarters of an inch in length, and is considerably darker than that of the preceding species. Its habits, however, are similar to those of the Indian meal moth. The larva constructs tubes of silk and particles of meal or other food in which it lives. When present in mills and elevators, it hides away during the pupating season. As stated

in my article in the American Miller for November (1895) and January (1896), I have received this moth from mills in California and Oregon, and in both cases it was found in the basement. Its life history is not fully understood. Some European authors state that it is biennial in development. It lives on cereals of all kinds and in all conditions, either in the kernel or in the form of flour, meal, or bran, and even, it is said, in the straw. It also attacks other seeds, and dried plants in herbaria, and recently has been reported as being injurious to potatoes.

There is still another moth, called the wolf moth, *Tinea granella*, that does considerable damage to stored cereals. It is not very abundant in America, and has therefore attracted little or no attention here. I have found it in stored wheat in California, and on one occasion bred the adult from larvae taken from a sack of corn meal purchased at a local grocery store in San Jose. This is a beautiful species, creamy white in color, thickly mottled with brown as shown in the illustration. It has a wing expanse of about half an inch. Like the grain moth this species is known to deposit its eggs in grain in the field. It is necessary, therefore, to keep a



THE INDIAN-MEAL MOTH.



THE MEAL SNOOT-MOTH.



THE WOLF MOTH.

close watch of grain in store. It infests cereals of all kinds, and a single larva is capable of great damage, as it has the habit of passing from one grain to another, spinning them together with its webs as it goes until twenty or thirty grains are spoiled. When full grown the larvae crawl all about the infested mass, leaving their webs everywhere, thus injuring more than they consume. I will treat the remedies, preventive and remedial, in a separate article.

### TRADING IN FUTURES IN 1636.

This letter was written by Samuel Symonds, Deputy Governor of Massachusetts, living in Boston, to John Winthrop, Jr., Governor of Connecticut, home in Ipswich, Connecticut, next to Thomas Boardman:

"I desire you would talk with Mr. Boardman and with his help buy for me a matter of 40 bushels of good Indiana corne of him or of some honest man, to be paid for now in ready money and to be delivered at any tyime in sumer as I please to use it. I would deale with such a man as will not repent if corne rise, as I will not if it fall."

This letter was written in 1636, and appears in the "Boardman Genealogy" just published.

### THE ONE-SIDED DEMURRAGE CHARGE.

Our usually fair minded contemporary, the AMERICAN ELEVATOR AND GRAIN TRADE, has been, in common with this journal, an advocate of reciprocal demurrage. In its current number appears an article so reproduced, and under the inspiration presumably afforded thereby it proceeds to "larrup" the roads for imposing, and the shippers for not more strongly resisting, this charge. In its zeal it is led into making a statement which is at least questionable, namely: "Large shippers or receivers are never required to pay demurrage, and its payment by small shippers is asked principally because the traffic managers feel that they can impose upon them with impunity."

Our contemporary is altogether mistaken in this statement. One of the largest manufacturers of cereals in Chicago is charged and pays more demurrage than all of the balance of the dealers and manufacturers in the same line put together. If there is any one thing in connection with railway operation in which no favoritism is shown, it is in the charges imposed by the Car Service Association. In this association, rich and poor, great and small, are put upon a common basis, and charges assessed with as near absolute impartiality as is possible in an institution directed by human beings. It is true that all our car service charges imposed are not collected; and it is also true that in the majority of such cases it is the large firms who do not pay; but that is not the fault of the association. It is the outcome of existing conditions.

When the payment of car service charges is refused and persuasive measures fail, two courses are open to the association, either to hold upon their own tracks the freight of such concerns as do not pay, or to sue in the courts for the collection of the charges. The first, if adopted, would result in a peremptory mandamus proceeding which would have the effect of securing to the shipper his property and committing the case to the courts with its attendant long drawn out and expensive proceedings. So that, in either case, the matter would go to the courts with all of the consequent vexations and expense. The arguments for reciprocal demurrage are sufficiently strong to justify its advocacy upon legitimate grounds and our contemporary should not be misled into stating current gossip as facts, in its efforts to contribute to this result.—Railway Review.

Our statement was not based on current gossip, but upon statements of a number of large shippers and receivers in different parts of the country. Several admitted that they were charged demurrage, but denied that they ever paid any. They do not have to pay it, so refuse. If all small shippers and receivers would unite and refuse to pay demurrage the railroad companies would soon ask its recalcitrant patrons to agree to that very equitable charge known as the reciprocal demurrage charge.

### STORAGE CHARGES AT BOSTON.

The elevator charges at Boston, including 20 days' storage, are as follows: For oats, barley and malt 1 cent per bushel, for all other grain 1½ cents per bushel; and for each additional 10 days or part thereof the charge is one-quarter of a cent. The charge for blowing grain is one-eighth of a cent per bushel. All grain in elevator is insured from fire by the railroad company.

No Grade corn is received in the elevators only upon orders from the owners thereof, subject to the approval of the inspector of the Boston Chamber of Commerce, and at the risk of the owners. The elevator charges for such corn are, for the first ten days or part thereof 1¼ cents per bushel, and for each additional five days or part thereof three-eighths of a cent per bushel.

All grain is inspected and graded in accordance with the rules of the Boston Chamber of Commerce.

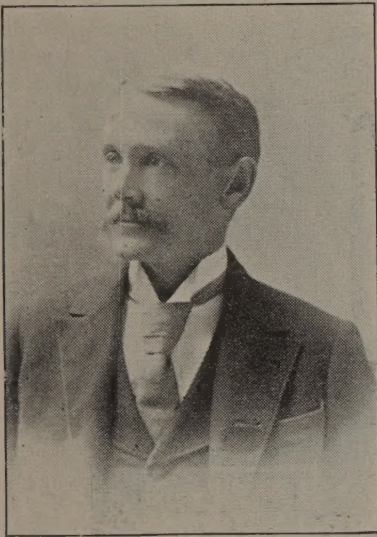
Newport News is getting to be quite a storing and shipping point for flour and grain. It has reached the dignity of a "visible supply point," and ought to be included.—Trade Bulletin, Chicago.



**P. B. & C. C. MILES OF PEORIA.**

Peoria is rapidly assuming an important position among the primary grain markets, and seems destined to be one of the leaders. It has a number of railroads which penetrate fertile grain growing regions; its public elevators have a total storage capacity of about 2,000,000 bushels, and its transfer elevators about 550 cars daily; it has a local demand for nearly 60,000 bushels of corn a day, and it has ample railroads to facilitate the shipment of grain to Eastern and Southern points. Last year Peoria received 38,164,595 bushels of grain, while St. Louis received but 32,850,282 bushels, and Kansas City 20,192,900 bushels. Of the grain received at Peoria 19,435,050 bushels was oats, and 15,596,695 was corn. Last year the receipts of grain were 4,500,000 bushels more than any previous year.

The firm of P. B. & C. C. Miles, composed of Philo B. and Chas. C., whose portraits are given herewith, has done business on the Peoria Board of Trade for nearly 21 years without a change. Its business has grown from year to year, and it is considered one of the safest and best firms on the Board. Both are now giving their undivided time to their commission business, and personally keep



PHILO B. MILES.

close watch over details, thus assuring shippers prompt and strictly reliable service.

Philo B. Miles was born at Washington, Ill., in 1849. His father, Benj. E. Miles, was a farmer, but in time moved to Washington and went into the milling and grain business, giving his son that predilection which induced him to go to a wider field as he grew older. He took a commercial course at a St. Louis business college, and on his return went to work for the Toledo, Peoria & Western Railway as telegraph operator and bill clerk.

In 1870 he went to Peoria and entered one of the grain offices of the Board of Trade as a clerk, and five years later, himself and brother embarked in the grain commission business for themselves under the firm name of P. B. & C. C. Miles.

In 1883 he was elected President of the Peoria Board of Trade, and since then has served on some of the most important committees almost continually. He represented his ward as alderman for four years in the city council, and served as mayor pro tem for a short time in 1893, and was elected mayor by the Republicans by over 2,000 majority. He was elected on his record, and his administration was an admirable one in many respects. It was marked by close attention to the finances of the city and the matter of public improvements. The street paving done during his term was the best up to that time, and there was a careful supervision kept over every department of the city government.

Chas. C. Miles was born at Washington, Ill., in 1852, received a fair education in public schools. During vacation he worked at teaming, farming and about the mill and elevator belonging to his father.

From the year 1870 to 1873 he was in the employ of the Toledo, Peoria & Western Railway in various

capacities, as railroad clerk, telegraph operator, station agent, and at last as telegraph operator in the superintendent's office at Peoria, where he was appointed train dispatcher.

He resigned this position very soon after appointment to accept a situation with a Peoria commission house, which he held until the organization of the firm of P. B. & C. C. Miles in 1875. He was president of the Peoria Board of Trade in 1889, and has served on leading committees.

**KAFFIR CORN.**

BY GEO. T. ZIMMERLE.

Those who are familiar with Southern Africa may know this grain, for, as its name indicates, it is a native of Africa. It was introduced into America about fifteen years ago by a gentleman living in Greenwood County, Kansas, who secured the seed from a friend then in the Kaffir country.

Since that time its cultivation has spread, until now it is one of the staple crops of Kansas and Oklahoma. While it is common in these sections, it is comparatively unknown in the Eastern states. A short time ago I made inquiries of a firm who manufactures thrashing machines, regarding a machine suitable for thrashing it, and the reply received was: "We do not know what you mean by Kaffir corn. What is it like?" A few days ago I received a letter addressed to the Lincoln Mill Co. of Chandler, Kan., asking for quotations of prices for seed, and inquiring for information regarding cultivation, purposes for which it could be used, etc., with a statement that the writer had noticed an advertisement of the corn and desired to introduce it into his section of the state.

Kaffir corn has a stalk like that of ordinary corn, except that it is shorter and thinner. Instead of bearing ears it puts out a single head at the top, where corn tassels. This head has clusters of little stems, which bear green, feather-like blossoms which grow into pods or sheaths inclosing the seed or grain. As the grain develops and matures it outgrows this hull, and when it is fully grown and thoroughly ripe only the lower part of the seed is inclosed, of which this hull is composed. In thrashing these sections open and allow the grain to drop out.

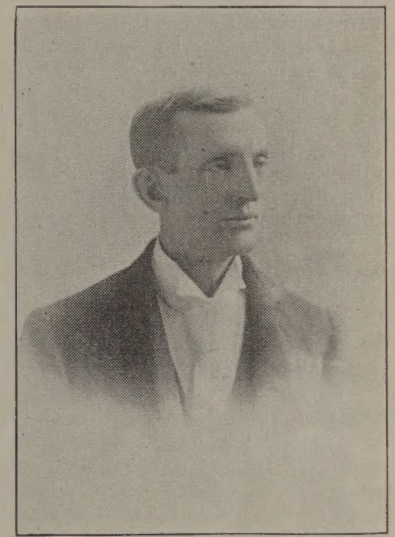
These heads vary from several inches to over a foot in length, the general average being about 10 inches. They are 2 to 4 inches thick, and carry from several hundred to over 5,000 grains to the head. Perfect, well-filled heads weigh from half a pound to a pound apiece, and will thrash about the same ratio as corn will shell; but the average will not vary much from the standard, which is 70 pounds of heads for 50 pounds of seed, while damaged or immature heads will fall short of this amount.

There are two species of Kaffir corn, red and white. The red has a long slender head, and the white, which is the most generally raised, has a shorter, thicker and more compactly formed head. The grain is nearly a clear white, excepting that there are small, dark-colored specks, one at the end where the seed is connected to the stem, and one at the opposite end. Fully developed grains are a little less than one-eighth of an inch in diameter, some being nearly round, but most of them are a slightly flattened oval. This seed is encased by a light tough bran inside of which is a thicker layer of a darker shade, very similar to the color of the hard wheat just under the bran. In the center it is whiter and appears softer. When thoroughly dry the grain becomes very hard, and is not so much subject to the ravages of weevils or worms as are wheat and corn, on account of its hardness. The red is a larger grain and softer, and appears to be of a coarser and more porous texture.

Kaffir corn can be planted at the same time as other corn, and when put in early will mature early. It can also be planted late, and unless there are very early frosts will mature and produce very good crops, as was the case in this country when many thousand acres which had proved failures in both wheat and corn during the exceptionally hot, dry weather of last year were afterward put in

Kaffir corn and made good yields. It can be sown broadcast, but to get best results should be planted in rows or hills, so it can be cultivated. While it grows luxuriantly on good soil it also does well on poor, sandy soil, and is an especially good crop on sod. If there is enough moisture in the ground to make it germinate and start growing it is almost impervious to heat and drouth. Through the hot sun and winds of summer, that shrivel and wither corn and grain, it grows fresh and green and reaches its most perfect condition. While it is benefited by seasonable showers, long continued wet weather will damage it if left in the field too long after maturing.

If planted during early corn planting time it can be gathered in July by cutting, drying and shocking at that time, but to get the best results for the grain it is desirable to have it ripen a short time before the first frost. When it is desired to save the fodder the corn is shocked, but for the best grain it is preferable to cut the heads from the stalks just below the grain and put them in a crib the same as corn, until ready to thrash, when, if it is kept dry and is not piled in quantities too large for proper ventilation, it will keep in good condition. When dry it thrashes out very readily, but owing to its



CHARLES C. MILES.

hard, flinty nature it is apt to be broken very much. When properly handled it is very prolific, yielding from 30 to 60 bushels to the acre.

Up to the season of 1895 Kaffir corn was raised principally for a feed crop, showing good results when fed to horses, cattle and hogs. To obtain the best results it should be thrashed and ground, for when fed in the head the dust and chaff is very irritating and is apt to cause the stock to cough. Also it becomes so hard that stock will not be able to digest it, but will pass it whole with other excrement. When ground into chop all animals learn to eat it and prefer it to corn. Like wheat it has very valuable fattening properties without the excessive heating qualities that are sometimes so undesirable in feed made from corn.

The scarcity of wheat and the last year's abundant crop of Kaffir led many of the millers of Oklahoma and Kansas to experiment in grinding it, and in some localities there were large sales of health flour—which very much resembled what is now being sold in many other places as Kaffir flour, Kaffir meal or Kaffirina. When ground on rolls by a gradual reduction system the bran shells off very readily, but the principal difficulty is to get rid of the little specks or the germ. This might and doubtless will be overcome in time, so as to make a special grade of flour especially adapted for use in tropical countries. At present it is used locally for making muffins or gems similar to Graham. Made into bread it resembles rye. It is most popular when made into griddle cakes, as when used for that purpose and by the same methods as are used to make buckwheat cakes, it produces an article which is easy to pass off as that time-honored breakfast standby.



## THE CONSTRUCTION OF GRANARIES.

No. II.

BY F. STALLMAIER.

The advantages of this system are as follows: The most complete utilization of space imaginable. Simple and easy mechanical changing. Convenient discharging. Accessibility. Turning of the grain without manual labor.

The word "silo" can be traced back to the Spanish word "sylos," meaning a measure, and, in an extended sense, a grain pit containing that measure of grain. These pits were in former years the receptacles for grain. As elevators are the means by which the grain is lifted from the vessel into the warehouse, and vice versa, the Americans adopted the word "elevator," and signify by that word a warehouse containing different mechanical lifting machinery and apparatus. The better and more distinct name is undoubtedly "grain elevator." The principle of storing grain in elevators is based upon treasuring up grain in hollow completely covered shafts. Therefore the building required for such purposes would contain no middle floors, but vertical partition walls, dividing the whole space into sections which receive the grain. As this principle is in all silo construction adopted, the distinctions of the various systems are to be found as follows: 1. In the shape of the shafts or bins in ichnographic projection. 2. In the material of which the partition walls are built. 3. In the different shapes of the bottoms of the bins. As regards the shape of the bins in ichnographic projections, the most effective utilization of space, stability of the construction, and cheapness of erection demand consideration. The ichnographic projections suitable for bins, and deserving consideration, are the square, the hexagon, and the circle. The rectangle is occasionally used instead of the square, but cannot be recommended as above all rectangles the square has by equal circumference the greatest area. The condition of the utilization of space is equally well answered by adopting the square or hexagon, while by a combination of touching circles a lost trefoil arises. As regards stability, the circle form is the best one, the curved surfaces offering a greater resistance to the strain than the straight ones. There being no difficulty in giving the square or hexagon ichnographic projection the required stability, it then follows that the chief object in construction will be the utilization of space.

To compare the expense of each system, we have to consider the number and length of the party walls required to cover a given space.

By taking the hexagon as the standard, we will denominate one side as the radius of the circumscribed circle= $s$ ; the radius for a circle of equal area would be 0.9  $s$ , and the sides of an equally sized square 1.58  $s$ . The circumference of each figure by equal area would be for the hexagon= $s$ , the square= $6.3 s$ , and for the circle= $5.65 s$ .

But the hexagon and the square have that prerogative that the bins around the one bin have partition walls in common. There are, therefore, four walls necessary for the first square, and only three walls are to be built for completing the second square, but in case four squares are placed two a side, the last square needs only three walls.

The number of walls required for dividing a given space (rectangle) into a certain number of sections by applying the square shape is easily expressed by a formula. As  $z$  the total number of sections,  $a$  and  $b$  the number of squares placed upon the two different sides of the rectangle;  $a \times b = z$ , so is the total number of walls expressed by  $n = a + b + 2z$ .

If hexagons are placed in the same manner, so that every row holds the same number, and denominates the number of hexagons in one row  $a$ , the number of rows  $b$ , therefore the total number of hexagons is  $a \times b = z$ , then the formula alters to  $n = 2(a + b) + 3z - 1$ .

According to these two formulæ the parting walls required for  $z = 40$ ,  $a = 8$ ,  $b = 5$ . By the square  $8 + 5 + 2.40 = 93$ . By the hexagon  $2.13 + 120 - 1 = 145$ .

By using the denotation  $s$  for the hexagon side, the total length of the hexagon projections by 40 shafts

in 145  $s$ . As the square side of an equal square area is 1.58  $s$ , and the number of walls 93, the total length therefore counts up to 146.9  $s$ .

From these figures it will be seen that the consumption of material in current feet in both cases is nearly alike. But as the square side has to be 1.58  $s$ , the thickness of a hexagon partition wall needs be  $\frac{12}{1.58}$ , nearly half of the square wall thickness. The results are, a saving of half of the material by adopting the hexagon ichnographic projection; but it must not be forgotten that this saving is dearly bought, as the erection of the hexagon shape requires more skill and appliances.

Therefore the selection in the shape of the shafts will not alone depend on theory, but also considerably upon circumstances and the material which has to be used.

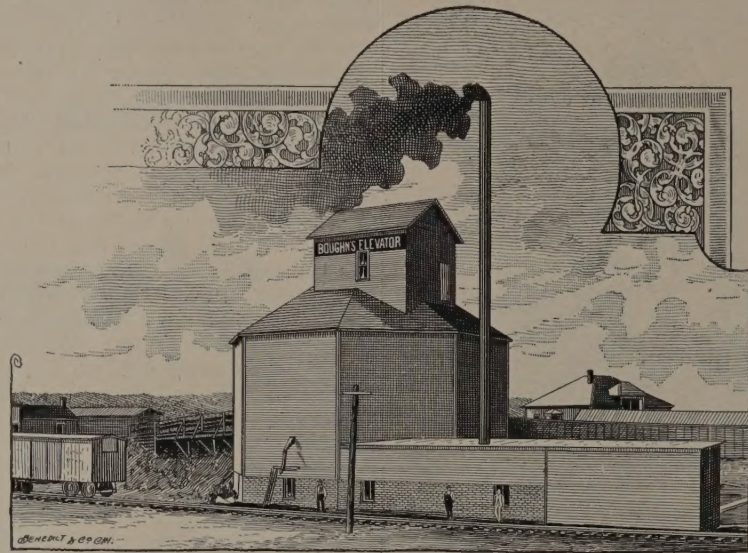
[TO BE CONTINUED.]

## BOUGHN'S ELEVATOR AT RANDOLPH, NEB.

BY MCCO.

The newspapers recently had a description of a house built round, with the idea that a cyclone twister would play around it and be unable to get a hold to lift from its foundations. It probably was

Boughn has one of the finest elevators in the West on the Short Line. It is unique in design, having a rotary dump. It was designed by B. F. Boughn, son of the owner, and cost over \$5,000. It has a capacity of 60,000 bushels, and can handle 10,000 bushels per day with ease. The cleaner is in the upper part, and the grain can be run from it direct to the cars on the track. It is octagonal in shape, having a diameter of 50 feet. It is operated by a 35-horse power high speed center crank engine, situated in a brick power house adjoining the main building. The power house is 40x25 feet. All the foundation timbers of the elevator center from the 2-foot brick outer wall to a stone weighing 3,000 pounds. Upon the cap of this stone rest the lower ends of the 8 dumps and 16 surrounding bins, all of which extend upward and outward to the outside foundation, forming an incline for the entire bottom to the center. The grain after being dumped is received from the center into a well 12 feet deep, and elevated to the top, when from a central point it can be run into any bin desired. The dump itself holds 6,000 bushels. From the boot to the apex of the elevator is 70 feet. Grain can be elevated and reelevated at will, in case it gets to heating, by simply lifting the slide and letting the grain into the boot. No scooping is ever required. Each octagon has three solid 2x4 partitions running from the cen-



BOUGHN'S ELEVATOR AT RANDOLPH, NEB.

not with an idea of building a cyclone resister that the unique elevator of Z. Boughn was built last year at Randolph, Neb. Whatever may have been the idea of the designer, he certainly produced an elevator, the like of which is not to be found elsewhere. It is octagon or eight sided, one side forming the entrance to the center. In the center of the elevator is a turn table large enough to hold a team and wagon. On the turn table is a dump, and at the edge of the turn table are seven trap doors corresponding to the sides of the elevator. These open into as many receiving sinks underneath the turn table. The bottoms of these bins feed into a spout leading to elevator boot in pit at one corner, where the elevator passes up, between angles, formed by the bins, to the top. From the elevator head grain is directed to the various bins located at the sides of and over the turn table. The storage bins feed to the center underneath the receiving bins, where grain feeds into spout leading to elevator boot and is elevated to be spouted to cars or other bins.

For the purpose of mixing grades or keeping each grade by itself this arrangement would seem to offer advantages, but it is too slow in operation when business is rushing. The wagon load of grain goes up the incline into the center on the turn table. The wagon is then chained securely and the table turned by hand to the trap door desired and locked, and then the load is dumped. The wagon and team are then turned to the entrance and go out the way they came in, off the incline. No other load can approach while there is a load inside. The owner claims to be pleased with the working of his elevator.

The Randolph Reporter, to which we are indebted for the use of the cut given herewith, says: Z.

ter to the outside, making the structure one solid whole, with no possibility of bursting.

## THE DECADENCE OF MONTREAL'S GRAIN TRADE.

The decadence of the grain trade at Montreal, referred to by Mr. Alex. McFee in his addresses before the annual gatherings of the Board of Trade and Corn Exchange, is a subject of the greatest importance to Montreal, says the Trade Bulletin of that city. Mr. McFee attributed the large falling off in our grain shipments in the first place to the neglect of the railroads in not providing proper facilities in the matter of freights for bringing it to Montreal, and, in the second place, to the want of sufficient lake transportation. As stated a few weeks ago in these columns, the shipments of Manitoba wheat from Fort William to Buffalo and New York for export last season amounted to 4,500,000 bushels, whereas the quantity of Manitoba wheat brought via Montreal for export was only about 100,000 bushels. It is not only the Manitoba trade, however, that has gone past Montreal, but the large wheat traffic of the American Northwest that formerly came to this port has been diverted to the United States seaboard, and thus the many millions of dollars spent on our canals will have been thrown away unless measures are adopted whereby this trade can be recaptured. It is evident that our canals will have to be deepened if we are to compete successfully for the American business, which is now done in much larger bottoms by the Erie route than can come down the St. Lawrence canals.



**BACTERIA IN GRAIN.**

And now bacteria have been found in grain, and in vast numbers, too, according to a report to the state department from United States Consul Stephan at Annaberg. The German agrarians, always on the lookout for any plausible pretext to keep out foreign competition, hailed with delight the news that Prof. Heinrich, in Rostock, had found numerous bacteria in Russian and Roumanian grain, which were the more deadly as they could not be rendered harmless even by the heat of the oven. They hoped that the importation of this grain would be prohibited in the same manner as American cattle and meat were excluded not long ago, on account of alleged Texas fever.

The matter was brought to the attention of the reichstag by an agrarian member when it presently appeared that the German government had already been making an inquiry. The director of public health reported that 16 German and 17 foreign samples of grain had been examined for bacteria. The purest was the American; then came Moravian, Bohemian and Hungarian barley; the most impure was Turkish rye. In one gram of German wheat 14,000 to 230,000 bacteria were found; in Russian, 256,000 to 309,000; in La Plata wheat only 5,000. A sample which showed 859,000 bacteria, in Rostock, showed 14 days later, in Berlin, only 150,000, so rapidly does the germ disappear. As regards the character of these bacteria, such as would endanger health were not found in a single sample, so that the grain is absolutely harmless. But even the worst bacteria are destroyed by the heat of the oven.

**THE PRODUCTION OF FLAXSEED.**

The large flaxseed crop in the Northwest, where half the annual yield is produced, has a tendency to hold down the price. Unlike most important agricultural products the Washington agricultural bureau has little information of it with respect to production in either yield, acreage or values. From the most authentic estimates at the time and information now obtainable the crop of 1860 yielded less than 1,000,000 bushels, increased to some 2,000,000 bushels in 1870, to 8,000,000 bushels in 1880 and to above 14,000,000 in 1891. Perhaps 20,000,000 is not too large to estimate the production for 1895, as the bulk of it is grown in the Northwest where the yield was very heavy. For several years Minnesota has been the leading state in the yield of flaxseed. Next to Minnesota is South Dakota, while North Dakota is rapidly increasing in acreage and yield.

Not only is the production increasing but the consumption is greatly enlarging. For the year 1894 our total exports were less than 15,000 bushels and in 1895 they aggregated only 30,000 bushels. In the same period the imports were 4,500,000 bushels, or 1,500,000 in 1894 and 3,000,000 bushels in 1895. The linseed of India is an important factor in regulating the world's prices, while the crop of the Argentine is attracting some attention and the exports from Black Sea ports cut considerable figure with Indian selling highest and River Plate lowest of all.

The present season has not been favorable in much of India owing to the want of rain about seeding time, and in some such provinces the acreage is reported short, while in others the reports are the reverse, with much larger acreage, the linseed taking the place of wheat. Altogether the general reports indicate an average crop.

Very little use is made of flax fiber in parts of India where the chief aim is to get the greatest quantity of seed, but in other districts the cultivation is for the mixed purpose of seed and fiber. The annual production in India is reckoned to range from 20,000,000 bushels to 30,000,000 bushels. India has some oil mills but the seed is largely exported to Europe to be crushed. It is grown in all kinds of soil, between clay lands and sandy loam. A common method in the cultivation is to mix the flax with another seed or two, crop at the same time and separate the seeds after thrashing. The tendency there is an increase in the area, now some 8,000,000

acres of the mixed crop, or say 4,000,000 acres of the pure linseed. Of the several varieties there is a white seed that gives 15 per cent. more oil to the pound and 10 per cent. more seed on the same ground.

**E. S. WOODWORTH & CO.'S NEW ELEVATOR AT MINNEAPOLIS.**

Minneapolis, the greatest primary wheat market of the world, now has elevator capacity for about 27,000,000 bushels of grain, and each year it is materially increased.

Woodworth Elevator No. 1, which is one of the latest additions to the list of Minneapolis elevators, was completed last fall. It is 56x65 feet, and the cribbing of its 40 storage bins extends up 60 feet. It has a storage capacity of about 150,000 bushels, and can receive, clean and ship 30 cars in a day of 10 hours. From cars on the receiving track, which

roof is covered with galvanized iron, and the sides with corrugated iron.

In the power house near by are two 60-inch by 16-foot boilers and a 100-horse power Sioux City Corliss Engine. The warehouse which was erected in 1890 is now used for storing screenings and feed. The small elevator was added the following year, and it now contains a feed mill and bran packer, a No. 8 Monitor Cleaner, and some other machines. It has a capacity of receiving, cleaning and shipping one car an hour. These houses, together with the new power house and elevator which was erected last year, give the Woodworth company facilities for handling 40 cars a day. In very busy times the entire plant is run night and day. The plant has over a mile of side-tracking, so it is well equipped for handling large quantities of grain quickly. Both elevators were erected by the Simpson & Robinson Co., elevator builders and designers of Chicago.

The firm of E. S. Woodworth & Co., which does a large business in grain and millstuffs, is composed



E. S. WOODWORTH & CO.'S NEW ELEVATOR AT MINNEAPOLIS.

runs through the house, grain is drawn by Clark Power Shovels into the receiving sinks, and elevated by three elevator legs, each of which has an elevating capacity of 5,000 bushels an hour. These elevators drop the grain into garnerers of 1,400 bushels' capacity; one of these garnerers is above each of the three 1,200-bushel hopper scales. From the hoppers of the scales the grain is spouted to the bifurcated loading spouts, or is conveyed to the bins by three Robinson Patent Distributing Spouts, and the power is transmitted to the elevators by Robinson's Patent Single Leg Rope Drive. Cars are handled by Robinson's Car Puller either on the receiving track or on the shipping track on the side of elevator shown in illustration.

The house contains one No. 9 Monitor Oat Clipper of 1,500 bushels per hour, and one Monitor Receiving Separator of 1,500 bushels per hour. A system of pipes extends to these machines and to the other parts of the house to collect the dust, which is drawn by a strong fan to the Cyclone Dust Collector over the boiler room and dropped into the furnaces from the Collector. The elevator is equipped with incandescent electric lights, and has five-inch stand pipes to which are attached reels and hose. The stand pipe is supplied with water by a 12x6x12 Stillwell-Pierce & Smith-Vaile Co.'s Fire Pump. The

of E. S. Woodworth, president; G. P. Harding, vice-president, and W. S. Woodworth, secretary and treasurer. Mr. E. S. Woodworth is a man of 40 years. He was with the Chicago, St. Paul, Minneapolis & Omaha R. R. in its freight department for about ten years. After severing his connection with that road he started in the elevator business, and has built up a very successful business in coarse grains and mill feed.

A sub-committee of the Committee on Agriculture of the House of Representatives voted adversely on the anti-option bill March 10, and the Committee itself tabled the bill, the vote being 9 to 6.

W. O. Dodge & Co. of Minneapolis have sued the Minneapolis Chamber of Commerce Clearing Association for an alleged wrongful selling of certain contracts for the purchase of 205,000 bushels of wheat, and ask \$50,000 damages. This firm had also been doing business on the Duluth Board of Trade. The plaintiffs allege that the defendant held their contracts which had been turned over to it for adjustment for the purchase of 205,000 bushels of wheat, and that the defendant wrongfully sold such contracts on Dec. 23, 1895, and that, by reason of the loss of the contracts and the injury to plaintiffs' credit, they have sustained \$50,000 damage.



### WAREHOUSE RECEIPTS.

It would appear from the evidence of Mr. Geo. Hague, manager of the Merchants' Bank of Canada, given under oath recently in the celebrated Chisholm case before Mr. Justice Davidson and a special jury, that the substitution of goods held in public warehouses under advances, by other goods of the same class, without the authority of the holder of the warehouse receipt, has been of much more common occurrence than the general public were aware of, at least so far as the Merchants' Bank is concerned. Mr. Hague stated in the witness box that it was customary for merchants who had obtained advances on goods upon warehouse receipts to replace them with other goods of the same class and value, without the knowledge or authority of the banks holding the collateral, and that such practices were perfectly legitimate. This statement, emanating from so high an authority, seems to have completely startled the great majority of our merchants, who were under the impression that merchandise, when once pledged to a bank or any other party or parties for advances thereon, and warehouse receipt therefor tendered as collateral, could not be disturbed by substitution of the same class of goods or otherwise without the authority of the holder of said warehouse receipt. If it were not so, the door would be flung open to all manner of frauds. A warehouse receipt is supposed to be negotiable paper; but if the goods which such document represents can be disturbed and tampered with, what safeguard has the party making the advance that he has full security for the collateral he holds? None whatever! We are in a position, however, to state, that although certain parties may have disturbed goods under advances to the banks and called for by warehouse receipts, without being authorized by said banks, such acts have been a distinct violation of the law, and those practicing them can be held to account.—Trade Bulletin, Montreal.

### OBJECT OF RETAILERS' ORGANIZATION.

As was announced in our last number the retail dealers in grain, flour and feed of Cincinnati have organized an association to be known as the Grain, Flour and Feed Dealers' Association of Cincinnati and Vicinity. The objects of this association, as stated in the preamble to its constitution and by-laws, is as follows:

To rescue our business from the condition into which it has fallen, and to raise ourselves to that standing in society to which we, as merchants, are justly entitled; to place ourselves on a foundation sufficiently strong to secure us from further encroachments and to elevate our business in Cincinnati and vicinity, is the object of the Grain, Flour and Feed Dealers' Association. To the consummation of so desirable an object we do pledge ourselves to unceasing efforts.

As stated in the Constitution the objects are:

1. To protect members from irresponsible customers.
2. To reform abuses and inculcate principles of equity and justice in the feed business.
3. To encourage frequent intercourse and consultation among its members.
4. To prevent or facilitate speedy adjustment of business disputes.
5. To collect, preserve and disseminate to members valuable information.

Any firm, corporation or individual engaged in the grain, flour or feed business, who are members of the Cincinnati Chamber of Commerce, shall be eligible to membership upon signing the Constitution and By-Laws and complying with the regulations of the same and paying the admission fee of \$1.

Any other firm, corporation or individual so engaged may become members if elected by a majority of the members present at any meeting, upon payment of an initiation fee of \$10.

Each firm or representative shall, upon signifying his intention to join the association, sign the Constitution, which requires a faithful compliance with

all its provisions and regulations; and shall deposit with the treasurer the sum of twenty-five dollars (\$25), which shall remain to his credit, and when any fines are drawn therefrom, the firm or representative shall make up that sum within ten days after notice by secretary.

The Cincinnati receivers were farsighted enough to discern that whatever would help their customers would help them, and according have encouraged the retailers in the work of organization and assisted them. The receivers of any market would surely find it to their advantage to do as much.

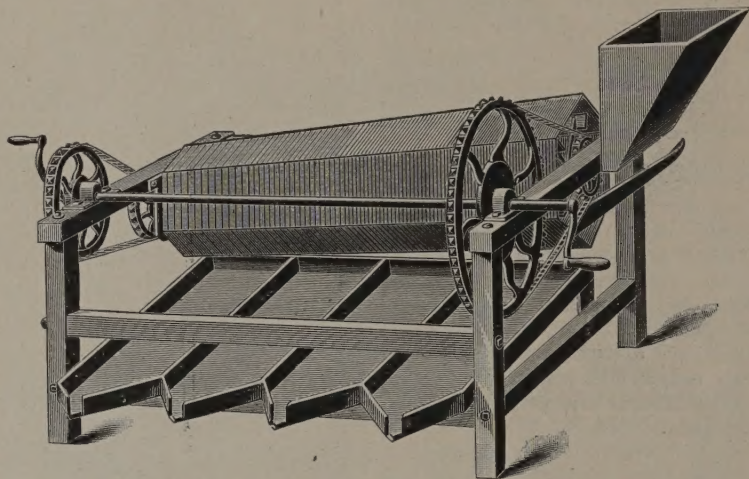
### A NEW GRAIN CLEANER AND GRADER.

The grain dealers of India are not so decidedly opposed to receiving dirty grain as are American dealers, and many of them do not attempt to clean it, in fact the grain exporters mix dirt with it, in order to protect themselves against loss by the dockage to which all grain from India is subjected when received in England. However there is a demand in India for clean grain and for grain cleaners. The method of harvesting and storing grain in India is very different from our own, and the cleaning is done by throwing the grain into the air on a windy day, or in such a way that the dust and chaff will

section are farther apart in the machine shown, but these openings can be adjusted as is necessary to make the separation desired.

The grain is fed into a hopper 15 to 18 inches wide. As the grain or seed leaves the hopper it falls upon the inclined feed board which extends into the head of the cylinder. The mouth of the feed hopper does not come in contact with the feed board, but a space is left through which chaff and dust is blown from the grain by a fan revolving in the head of the cylinder. This fan is set upon a sleeve about the journal which extends through the cylinder, and it is revolved much faster than the cylinder, by a chain from the big sprocket wheel at the head of the machine.

Outside and touching the surface of the cylinder is a stationary brush to keep the spaces between the wires clear. As the cylinder revolves this brush will force back into the cylinder all matter which lodges between the wires. The cylinder being inclined, all grain which enters it naturally gravitates toward its tail end as the cylinder revolves until it falls through the interstices or tails over. The inclination is altered according as it is desired to clean the grain. If the operator wishes to grade very accurately, and clean closely the inclination of the cylinder will be very little. If he wishes to clean very rapidly the inclination and speed of the cylinder is increased. Under each section of the



HAUSER'S GRAIN CLEANER AND GRADER.

be blown out by the fanning of the air with a large blanket in the hands of two natives, while a third drops the grain from an elevation.

While residing in Northern India, 1,000 miles from Calcutta, in 1863, Mr. I. L. Hauser, who is now in Chicago, sent to Racine for one of the fanning mills then made by A. P. Dickey. It was probably the first fanning mill in India and from it as a pattern a number of mills were made. Since then he has tried several kinds of mills, but he says "they did not give satisfaction for the reason that wheat, flax, mustard and other seeds are raised in the same crop."

Grain merchants wish to extract the oil seeds for use and export, as they are more valuable than the wheat. The grain is thrashed by the treading of cattle upon it as it lays on the ground. Much dust and earth adheres to the wheat, and the natives do not hesitate to add a liberal quantity of fine sand and pulverized brick. After years of experiments and much expense Mr. Hauser designed the grain cleaning machine illustrated herewith. The machine consists of a hexagonal cylinder frame two feet in diameter and six to ten feet in length, on which is wound a 1/8-inch steel wire from one end to the other. The cylinder has six bars supported by spokes at intervals of two feet. Long strips or plates nicked crosswise are placed in a groove in the outside of these longitudinal bars. The wire is placed in these notches when wound around the cylinder, and thereby held rigidly in position. The space between the wires is regulated by changing the groove plates.

In the first section of the cylinder at the head of the machine the wire is wound very close so that the openings are very small and nothing but dust can sift through. The wires of each succeeding

cylinder is a trough for receiving each grade of grain as it falls from the cylinder.

The machine can be used for grading coffee, rice, sand, powdered ores, etc., as well as grain and seeds. It can be operated by hand or power. It is so simple in construction that anyone can adjust it to grade any granular material. The inventor of this machine, Mr. I. L. Hauser, is now in this city, but will soon return to India.

### FAILURE OF SPRINKLERS.

Charles P. Wurts, in a letter to the Chicago Tribune on the recent elevator fire at Minneapolis, says: "It is difficult to understand how there could be a more complete failure of the much remarked 'sprinkler protection.' According to all reports the equipment was 'up to standard.' In other words everything had been done as regards piping, number and location of heads, and sources of water supply, to meet the requirements of the underwriters and to secure a reduction of 25 per cent. from the former rate allowed for this protection. It is doubtful whether the fact that the greater part of the insurance was placed with non-board companies and Lloyds will prove of much consolation to the general managers, as it seems to be acknowledged that the risk was a superior one and that liberal lines would have been written by the board companies had the opportunity been presented."

Automatic sprinklers, if properly placed and kept in working condition, will extinguish any fire which originates within an elevator, but if given no care the equipment will naturally get out of order and be of no more protection than so much old iron piled in one corner of the house.



**FREE SEED DISTRIBUTION.**

A recent interesting incident in Congress has been the discussion of the attitude of Secretary Morton in relation to the question of seed distribution. As is well known, the Secretary has been an earnest antagonist of the system of free distribution which he found in force when he entered the Department of Agriculture as its chief. After vainly endeavoring to get Congress to limit the appropriations for seed distribution, the Secretary in July last took the heroic step of issuing an order abolishing the seed distribution bureau on the ground that the Secretary of Agriculture could only purchase for distribution such seeds as were rare and uncommon to the country or such as could be made more profitable by frequent change from one part to another.

A great many people regarded this action of the Secretary as exhibiting great good sense, but Congress appears to take the matter differently. In spite of protests from some members that it was going in the direction of pure communism, the House disposed of the question of seed distribution by adopting an amendment to the Agricultural Appropriation bill requiring the Secretary to expend \$150,000 in the purchase and distribution of seeds, the best that he can procure, without reference to the requirements of the law about the varieties being rare and uncommon.

The free seed distribution has long been one of the rankest abuses heaped upon a tolerant people. Congressmen have appropriated money for this purpose, knowing at the time that they were appropriating money to buy presents for their country constituents. A few refused to apportion their part of the steal among their farmer friends and hauled it off to farms of their own. In the interest of economy and honesty the practice should be discontinued.

**ELEVATOR MEN AGAINST TRACK TRADERS.**

It seems to have dawned upon the avaricious New York public elevator men that they could exact storage charges (they do not deign to transfer grain) from a greater per cent. of the grain handled in that city, and accordingly they petitioned for an increase of 300 per cent. in the demurrage charge. In order to avoid arousing all track traders, they make a special fight against those who deal in oats on track.

The Produce Exchange Reporter of that city says: "A meeting of the oat trade held February 26, called by the grain committee for conference, was well attended. The proceedings developed the fact that claims were made by a section of the trade known as the elevator interest or buyers of graded oats, that the rules of the Exchange governing the delivery of oats on track needed changing, that the present charges to be paid by the buyers of track delivery oats are too small and that it would be of great benefit to have them increased, also that the present charge for car service or demurrage on track oats of \$1 per day be increased to \$4 per day would contribute to the advantage of the trade, and that the railroad companies be requested to make that increased charge, also that other privileges now extended by the companies be withdrawn, namely, free lighterage in special cases, such favors being very detrimental to the good of the traders but possibly much good would result if they (the companies) will comply with the prayer of the petitioners."

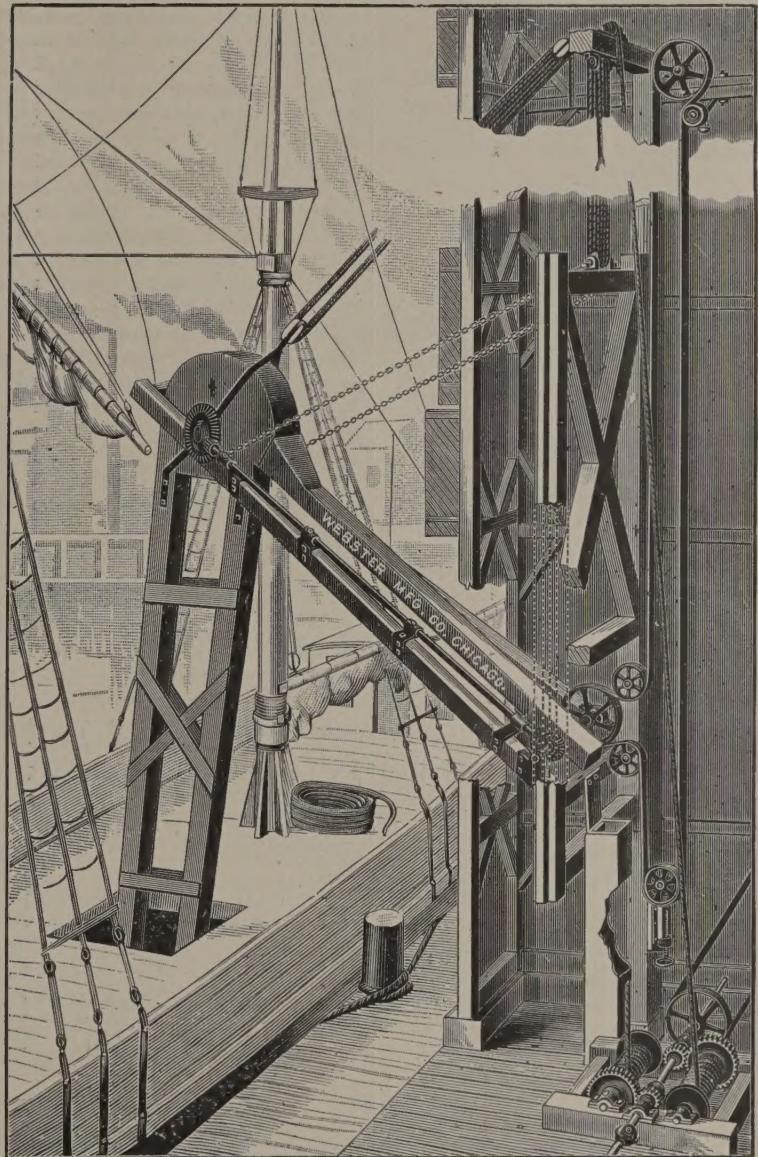
Such solicitude on the part of the public elevator men regarding the interests of the oat trade is enough to make a brass mule shy. The exorbitant charges levied upon the grain trade at New York have already driven much of it to other ports, and the granting of the petition would so materially increase the load upon the grain trade of that port, that the little remaining trade would drift to other ports, where grain is transferred for a fair fee and other charges are reasonable.

The all-hog plan of conducting the grain business of any terminal does not take well with country shippers and they are the ones whose favor the city commission men must win and keep, not the public elevator men. In Chicago, the public elevator men

have, by their greedy practices, driven much trade from the city, and doubtless New York elevator men have done as much. If New York commission men want country shippers to favor them with shipments they must see to it that the fees levied upon his shipments are not so large as to offset his profit.

**THE BOOM STYLE MARINE LEG.**

We present on this page an illustration of what is known as a Boom Style Marine Leg. This leg is raised and lowered into the ship by means of automatic power winches. It is usually arranged to deliver the grain into a hopper scale weighing on an average of 200 bushels a minute for rapid work, and from this hopper scale it is delivered into an



THE BOOM STYLE MARINE LEG.

inside leg, which delivers it into the elevator proper.

This style of leg, while not having the capacity of a slant leg, is somewhat cheaper, and has some advantages over that style of leg. The construction of a house and the class of work it has to do determine the style of leg to be erected. Improved machinery for operating marine legs and all leg fittings such as boots, belts, cups, driving mechanism, hoisting rigs, etc., are supplied by the Webster Mfg. Co. of Chicago.

New York is getting ahead of Chicago in the manufacture of "fake" market news. But they must have something down there to trade on, and it does not make much difference what it is.—Trade Bulletin, Chicago.

Flax straw is being used for fuel in Codington County, South Dakota, by farmers and others, and the flour mill at Watertown has used nothing else so far this year for generating steam. It is said to have resulted in quite a saving in the cost of fuel,

**GRADING AND INSPECTION AT DULUTH.**

Strange as it may seem, there seems to be more or less misunderstanding about the manner in which wheat is inspected at Duluth, and the connection of the commission man with it, says the Duluth Commercial.

So far as the latter is concerned, he is absolutely powerless in having the grades established, excepting his privilege of appealing from the decision of the deputy inspector. When a car of grain arrives here, it is boarded by a deputy inspector, who is employed by the state of Minnesota, which has established for his guidance rules and regulations for the grading of all kinds of grain. He thoroughly

samples the car, and determines what grade it is entitled to, and leaves a slip in the car, showing the grade.

If the commission man to whom the car is consigned believes that it is entitled to a better grade, he has the privilege of asking for a reinspection, which is made by the chief deputy inspector at this point, and if his decision is still unsatisfactory, an appeal can be taken to the inspector in chief. This latter is rarely done. There is no cost attached to an appeal, if the grade is changed, and if not changed is borne by the party appealing. It should be also borne in mind that the buyer is entitled to ask for regrading as well as the seller.

Complaint is beginning to be made that the city of Superior, Wis., does not provide adequate fire protection for the elevators and mills located there, which carry a total of nearly \$4,000,000 insurance. A liberal policy of protection would make possible quite a saving in insurance.



# COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

## THE PUBLIC IS ENTITLED TO RECIPROCAL DEMURRAGE.

*Editor American Elevator and Grain Trade:*—It is with great pleasure that we note you are giving some attention to the car service outrage in this city. We trust you will continue giving this important matter your attention until the imposition is overcome or the rule is made to work both ways. Equity or reciprocity is all we wish, and we think the American public is entitled to that.

We inclose \$1 in payment of one year's subscription to your valuable journal.

Yours truly,

UNION GRAIN & HAY CO.,

Cincinnati, Ohio. W. W. Granger, Manager.

## WAREHOUSE LAW WILL NOT AMOUNT TO ANYTHING.

*Editor American Elevator and Grain Trade:*—The bill providing for public elevators in Iowa, which is now before the legislature, will amount to nothing. That is the general opinion here. The farmers in this section are their own storekeepers and sell when they get ready. The member who introduced the bill seems to have done it for the sake of notoriety, knowing very well that the farmers of Iowa are too independent, and need no law governing the storage of grain in public houses.

Very respectfully, GERVAIS FAIS.

Eddyville, Iowa.

## SHIPPING AT TACOMA.

*Editor American Elevator and Grain Trade:*—According to the report of the harbor master of the port of Tacoma, Wash., for the month of February, the total exportation of breadstuffs was as follows: Wheat, 583,169 bushels, valued at \$385,247; flour to China and Africa, 44,569 barrels, valued at \$133,176. The inward registered tonnage was 41,980, inward cargoes 7,590 tons; outward registered tonnage 45,219, outward cargoes 54,450 tons. The deep sea arrivals were 28, departures 30.

SAMUEL COLLYER,

Secretary Chamber of Commerce.

Tacoma, Wash.

## DESTRUCTION OF ELEVATOR.

*Editor American Elevator and Grain Trade:*—Our elevator at Freeland was destroyed by fire on the morning of February 3. The fire was caused by the explosion of the gasoline tank that supplied the engine, the explosion taking place while the tank was being filled. The loss amounted to \$5,000; insurance \$2,000. The elevator contained 1,800 bushels of oats, 1,500 bushels of wheat, 200 bushels of beans, 15 tons of baled hay, 80 barrels of salt, and a quantity of corn and buckwheat. Frank Mills, son of the proprietor, was severely burned by the explosion, which covered him with gasoline.

Yours truly, BAY CITY GRAIN CO.

Bay City, Mich.

## PROPOSED IOWA LAW WILL BENEFIT NEITHER FARMER NOR DEALER.

*Editor American Elevator and Grain Trade:*—I have carefully examined the proposed public warehouse law. If it is enacted it will be a nuisance. It would certainly cause a great deal of labor and expense and vexation, and I can see no real benefit that would be derived either by the farmer or the grain dealer.

Under the law, if a farmer wished to haul to an elevator 100 bushels of grain or more, when the roads were good and he had plenty of time, and store it until he chose to sell it, say 30 or more days, paying one-quarter of a cent per bushel a month for storage, he would not be allowed to do so. Or in other words, the parties owning or operating the elevator would not be allowed to receive it without having it inspected by a regular inspector. The owner or operator of the elevator would have to take out a license and give bond in the sum of \$10,000. All this would be needless expense, as

also would be the making out of a sworn statement every Tuesday morning, etc.

Unless the law was complied with no grain dealer would be allowed to receive as much as 10 bushels of grain for a consideration for storage, and farmers would often be compelled to take the lowest price for their grain or haul it in when the roads are the worst.

Truly yours,

GEO. W. WHITE.

Fairfield, Iowa.

## THE PROPOSED IOWA WAREHOUSE LAW IMPRACTICABLE.

*Editor American Elevator and Grain Trade:*—I am perfectly satisfied in my own mind that the proposed public warehouse law in Iowa is utterly impracticable. It will fail to remedy the evils that its advocates hope it will do away with. It will create a swarm of political officials whose salaries will be paid out of the hard earnings of the farmers, and it will take from the small country elevators the privilege of assisting the poor farmer by advancing him money on grain stored with them. In this section of the state it has been the custom for farmers to haul in their grain when roads are good and prices are unsatisfactory and store it for six months without charge if it were bought by the elevator storing it. This grain is seldom left in store more than three months, when it is sold. Elevator men frequently make liberal advances on grain stored this way.

The enactment of the proposed law or any similar one would put a stop to all such accommodations, as the small country elevators could not store grain in any quantity if not permitted to sell, ship and replace the grain by purchasing. Under this law small elevators would be compelled to give way to the large elevator companies which have the capital to build lines of elevators especially designed for storing grain.

Personally I have no objection to state supervision of my business, provided there is no discrimination in favor of certain lines of trade. Under this proposed law the elevator man who stores a few thousand bushels of grain would have to give a bond of \$10,000; the banker who receives a million dollars in deposits is not compelled to give one cent of actual security. This law enacts that there shall be sworn weekly statements of all the business transacted by the elevator; from the banker only quarterly statements. It provides that once each year all grain in store must be weighed out—a physical impossibility if the house is full, except by shipment.

However, as Iowa has no terminal markets or elevators, it is scarcely worth while to discuss this proposed law, as it will be simply a farce, inoperative as far as the small elevators are concerned, and therefore a total failure as regards the accomplishment of the object for which it was framed.

Yours truly,

H. C. DARRAH.

Emmetsburg, Iowa.

## SHORTAGES IN SHIPMENTS.

*Editor American Elevator and Grain Trade:*—In the February number of your valuable journal Mr. E. R. Ulrich Jr. urges shippers to keep up the agitation against short weights at terminal markets. I believe with Mr. Ulrich and others that if this question of shortages can be settled at all it should be settled as soon as possible. It is first desirable to locate the evil, find who is responsible for shortages. Perhaps both the man at the country point and the one at the terminal have already settled it to their satisfaction. But I think that a middle ground is the correct one, if I, as a weighman at a terminal point, can admit that the principal cause of shortages does not lie with the very men who think they are the wronged ones. I will admit that these complaints of shippers have done good, and perhaps corrected a good deal of carelessness.

Absolute harmony in weights between any two elevators is next to impossible; but there is no good reason why, with proper facilities, the weights on an average should not be satisfactory. But I have found that almost all of the shortage claims that are received, on cars I have weighed, come from points where poor weighing facilities are in use, and where rather haphazard methods are employed. I reach

this conclusion from the letters accompanying the claims and from a discussion of the question with numerous grain dealers and elevator men. I recall an instance in point where a shipper loaded two cars of oats—the contents of a bin in his elevator. He wrote his commission man to look after the weight of one of these cars—the one I weighed—claiming it must be short, as the car was loaded away above the grain line. He would know how it stood when he heard from the other car as he knew the combined weights of the two cars. So he said. The letter closed with: "I don't want to raise an alarm until I look into the bin and see if it was run empty."

Once in a while a claim will come in which has a statement of the wagon loads, some forty or more, that were loaded into the car and a shortage figured out. As near as I can learn a good deal of the grain received at country elevators is weighed on wagon scales in the various amounts as delivered by farmers and placed in a bin, of which an account is kept until enough has accumulated for a carload. Then a spout is attached to the bin and the contents transferred to the car. The only weight is obtained by adding up the different lots of grain that were put together in the bin. I am curious to know if this is the method employed at those points whence complaints have come recently. Is it strange that a difference should appear between the weights obtained in that manner and those obtained from first-class hopper scales where the whole carload is weighed at once?

I do not say that a terminal weighman will make no mistakes. If he is careless and has his mind much occupied with matters foreign to his work, there is no telling how many mistakes he will make; but such a man could not retain a position any length of time as a weighman in an elevator. On the other hand, if a weighman cares anything about his position or reputation he will apply himself to his duty and study out some system suited to his work, that when followed out will compel attention to business. I have some mistakes to my credit, but how many or of what amounts I cannot say. I do know that I have mixed different grades or kinds of grain in distributing it to the bins. The work is similar and is done at the same time as the weighing, and I believe my mistakes in weights are no more, if as many, as those of mixing grades, because I have a check on my weights that I do not have on the spouts. Altogether my mistakes in mixing grades amount to about one car in 3,000.

There is no use in charging the weighmen with dishonesty. It proves nothing, and the argument is a poor one because there is never any trouble about being able to fill receipts. If mistakes occur they are as likely to be in favor of the elevator as against it, and therefore may not affect the balance. The toll system is only one step from dishonesty, and that it is not practiced as much as it formerly was is the best thing that can be said of it. There will always be a shortage of the amount of toll taken, and shippers should not tolerate it.

This agitation has not done any harm, but much good, I believe; I think, however, that it has been one-sided, and that shippers are mistaken in placing all the blame in one place.

## STORAGE WEIGHMAN.

Francis M. Drudge et al. recently brought suit against Leiter & Petersen in the Circuit Court at Rochester, Ind., to recover the value of wheat stored in defendants' mill when it burned. A verdict has been rendered in favor of the defendants.

The Illinois Central has given notice that it will abolish through grain rates from Illinois points to the East wherever this line comes in competition with the Santa Fe, which has already withdrawn the rates from all its stations in the state.

The Supreme Court of the United States has sustained the amendments to the Interstate Commerce law passed by Congress in February, 1893, by which a person is compelled to answer all questions touching the violation of law, whether criminating himself or not, such person not being liable for prosecution with respect to unlawful transactions concerning which he testifies.



## A SCHEME OF A BUCKET SHOP KEEPER.

One of the concerns which have just been indicted by the Chicago grand jury for bucket shop-ping has discovered a royal road to fortune, which with rare business generosity it is offering to share with its customers. It has issued pretty pink circulars to people all over the country under the heading "Again we have a good thing." The circular reads as follows, and if it is any indication of the kind of business that the bucket shops have been doing there ought to be no trouble in securing indictments against some of their proprietors on other charges more palpably criminal than bucket shop-ping:

"March 9 we will open a special pool to be governed by ourselves for two months, from March 9 to May 9. The shares will be \$25 each. We will guarantee all who subscribe positively against any loss, but we will charge on all trades we make for this special pool double our regular commission. The pool will be closed March 10 and not opened again till May 10. Nobody can withdraw before that time, when a detailed statement will be sent every subscriber. No money for this pool will be accepted after March 10, so send at once. Remember, we guarantee you against any loss. Our last pool paid 100 per cent. net."

If the recipients of such literature will send it to Chief Inspector Stuart, Chicago, they will do much toward discouraging the working of such schemes through the medium of the United States mails, and save many an unwary sucker from an untimely end.

## THE BUCKET SHOP EVIL.

C. A. Whyland & Co. have sent out a circular letter in regard to the bucket shops, from which we take the following: A speculator is always entitled to the benefit of the effect his purchase or sale may have on the legitimate active market, which is entirely controlled by supply and demand.

If he buys wheat on the Chicago Board of Trade, his purchase makes the market just that much stronger in his favor, owing to his demand. If, on the contrary, he "buys" his wheat in a "bucket shop," his "purchase" has no effect whatever on the regular market, as the bucket shop man "sells" him the amount he wants, relying on his superior capital and false quotations to eventually "freeze out" his victim. In other words no actual transaction takes place, as the "customer" simply bets with the bucket shop man as to what the traders in the legitimate market are going to do.

When the "customer" loses his money, the bucket shop man wins it. When all the "customers" win, the bucket shop man loses, and generally skips with the funds on hand if the amount is large enough. Their principle is, "heads I win, tails you lose." These concerns usually flood the country with circulars, advising those who deal with them to "pyramid wheat." This and all other "systems" proposed by them invariably end in disaster to the victim and the transfer of his money to the profits of the bucket shop.

These bucket shop "firms" are scattered all through the cities and towns of the country. They always pretend to be connected with the Chicago Board of Trade and advertise as regular reputable commission houses. They always deny that they are bucket shops, but their pretended connection with the Board of Trade is a fraud. Not one of them can show any evidence of respectable commercial standing, although they may have a large amount of money on deposit in the local bank where they are operating, to inspire confidence. This sort of thing has brought grain speculation into disrepute with many people who have never taken pains to investigate the character of those with whom they deal.

These "firms" are not members of the Chicago Board of Trade, and would be promptly expelled if they were. When a member of the Chicago Board of Trade deals dishonestly with a customer he is expelled and commercially disgraced. A bucket shop has no reputation at stake, is sub-

ject to no rule or discipline, and differs from a faro bank only in name.

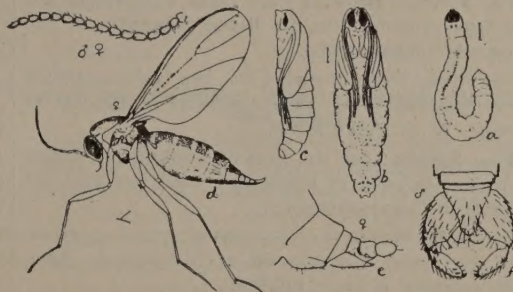
It is to the interest of a reputable commission house that its customers should be successful, for the simple reason that a successful man operates oftener, and pays more commissions, than one who is unfortunate. The profits of a bucket shop, on the contrary, do not consist in the commissions they charge, but in the margins they win from their customers.

## A NEW WHEAT PEST.

BY D. W. COQUILLETT, IN "INSECT LIFE."

From observations made both in this country and in Europe it appears that the larvæ of the different species of *Sciara* feed principally upon vegetable matter in a greater or less state of decay, their favorite haunts being beneath the loose dead bark of various kinds of trees, in the deserted burrows of wood-boring larvæ, in decaying wood, partially decayed galls, under excrements, in mushrooms, etc. On pages 19 to 21 of his Seventh Annual Report as State Entomologist of Illinois, Prof. S. A. Forbes gives an interesting account of an undetermined species of *Sciara*, the larvæ of which feed upon the interior portion of newly planted kernels of corn, and also attack the roots and bulbs of various kinds of flowering plants.

In our illustration *a* represents the larva of the *Sciara tritici*; *b*, newly formed pupa, from below; *c*, same later, from side; *d*, adult female, greatly



enlarged; *e*, female genitalia; *f*, male genitalia—still more enlarged (original).

Observations made several years ago at the insectary of the Department indicate that even in our own country the larvæ of at least one species of *Sciara* are also destructive to young wheat plants. On March 17, 1885, a large number of adults issued from a jar containing plants of this kind that had attained a height of from six to eight inches. They already indicated an unhealthy growth by a more or less yellowish appearance, and an examination of their roots revealed the fact that these had been severely injured by the larvæ, many of which were still present and were observed to feed upon the roots and interior of the stems both below the surface of the soil as well as in the interior of the stems a short distance above the surface. As many as eight larvæ were sometimes found in one of the stems, and they had also penetrated the kernels of wheat from which the plants sprang; many of the smaller rootlets had also been devoured, or more or less injured, by them.

The larva is of a milk-white color, with a prominent black head, and attains a length of about 6 millimeters. Pupation occurs in an oval cell lined with a few silken threads, the cells being formed at a depth of half an inch or less beneath the surface of the ground. The eggs are usually scattered on the ground, but are sometimes deposited in clusters of twenty or more; they are oval, polished, white, and measure about one-tenth of a millimeter in length.

The Farmers' Warehouse Company, of Madella, Minn., was recently robbed of a large amount of wheat by someone at first generally alleged to be the buyer. The net losses are \$6,000. It is the opinion that some commission firm in the cities is generally responsible, with the inspector of the warehouse, for the sale of stored grain, and steps will be taken for the recovery of some of that so sold. The inspector has covered losses made through him.

## •DOTS.AND.DASHES•

Senator Cullom has introduced a resolution in the Senate favoring a uniform classification of freight.

The past month has been a very bad one for some of the Chicago bucket shops, and worse for their customers.

To the country speculator: Chicago bucket shop keepers are surviving the indictment with new names. Look out!

The elevator companies of Superior and Duluth are sending out circulars to farmers giving instructions for separating smut from wheat.

Rice mill insurance is being declined in New Orleans on account of the severe losses sustained. Faulty construction is given as one of the reasons for the frequent fires.

Exports from the port of New Orleans during February compared with those of February, 1895, included: Corn, 3,352,372 against 467,442 bushels; wheat, 47,020 against 73,842 bushels.

A new field of usefulness has been opened for the bounteous tuber. J. S. Bartholomew of Grand Forks, N. D., heats a large building with potatoes, and says that they make as cheap a fuel as wood at \$3 a cord.

The Hyatt elevator at Wheatland, Ind., was recently robbed of 196 bushels of clover seed. William Hyatt has offered a reward of \$50 for information that will lead to the arrest of the guilty parties.

Wm. J. Connors, who some time ago ran a bucket shop in Bloomington, Ill., and who went to live in Mexico with about \$15,000 of his patrons' money, is reported to have died there recently of consumption.

The Chicago Flour and Feed Dealers' Association held its annual election March 4 with the following results: President, Geo. S. Blakeslee; vice-president, H. N. Lafrentz; treasurer, F. Grimsell; secretary, M. M. Freeman.

The Louisville & Nashville R. R. recently issued an order at Nashville, Tenn., to the effect that no inspection of cars would be allowed until the bill of lading was returned. Some very quick action on the part of the hay and grain men proved sufficient inducement for the railroad to rescind the absurd order.

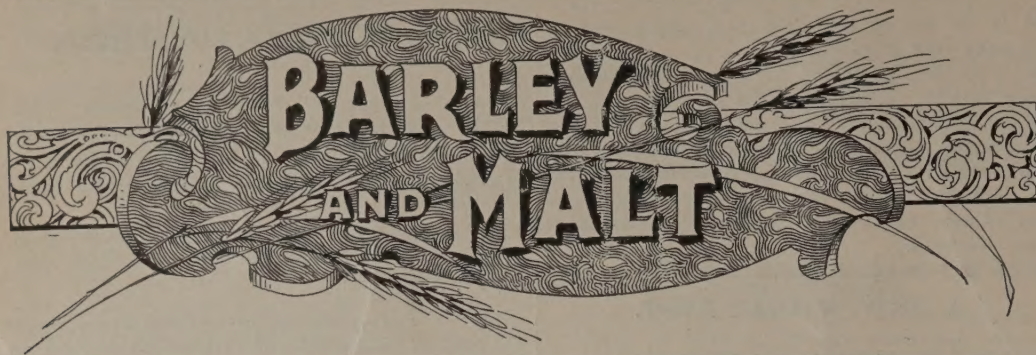
"Davis' Tables" is a volume of tables showing the price of wheat or other grains from 25 cents to \$1.25 per bushel, also the value of bushels and pounds of grain weighing 56, 48 and 32 pounds to the bushel from 15 cents to \$1.50 per bushel, also showing amount of dockage on any size load of wheat.

About fourteen bucket shops went out of business at Chicago during the five weeks just previous to the returning of the indictments. The money of the customers departed at about the same time. Outside speculators are beginning to realize that they are almost certain to lose their money if their trades are made through parties who do not execute their orders on the open market.

Under the seed grain law the County Commissioners of Minnehaha County, South Dakota, loaned to the farmers last spring \$27,000. All of this has been paid back except \$108, and that is more than offset by the interest. The grain raised from this seed sold for \$208,996. This leaves a balance of \$181,996, which is the amount of money by which the county is richer than it would have been but for this public loan.

The Northern Pacific Railroad has completed at its shops in St. Paul a number of box cars designed for carrying grain which have a capacity of 70,000 pounds. These are supposed to be the largest cars ever built for this purpose, and their carrying capacity is only equaled by a few specially constructed cars for particular purposes. The cars are 42 feet long on the outside and 41 feet inside, 9 feet and 11 inches wide and stand 12 feet 5½ inches from the rail to the top of the roof. They have a cubic capacity of 3,157 feet and each weighs about 32,000 pounds.





H. Schnurr has erected a brewery at Camden, N. J.

George Delger, brewer of Louisville, Ohio, assigned recently.

Lorence Dantzer, brewer of Baden, Ont., assigned recently.

Louis Kielhofer's new brewery at Truckee, Cal., is completed.

Muller & Walter have erected a brewery at Bozeman, Mont.

The Las Vegas Brewing Co. of Las Vegas, N. M., has assigned.

The Dubois Brewing Co. of Dubois, Pa., is to erect a new brewery.

Miller & Kirby, maltsters of Weedsport, N. Y., assigned recently.

N. Nelson of Sapperton, B. C., will erect a brewing plant at that place.

John Kopp is going to build a brewery at Astoria, Ore., to cost \$65,000.

Andrew Roos has completed a new brewery at Nebraska City, Neb.

Thomas Norton will erect a brewery at Anderson, Ind., to cost \$60,000.

A brewery has been erected at Mogollon, N. M., for John Cronne & Son.

The Covington Brewing Co. has succeeded to C. P. Lang & Co. of Covington, Ky.

An addition is to be erected to the Canton Brewing Co.'s brewery at Canton, Ohio.

The San Diego Brewing Co. will erect a large modern brewery at San Diego, Cal.

The Anchor Brewing Co. of Dobb's Ferry, N. Y., will erect additions to its brewery.

Hess & Pfaelzer, commission dealers in grain, hay, etc., of Chicago, have incorporated.

Alfred G. Neumaier has succeeded Leo Wagenmann, brewer, of Kalamazoo, Mich.

Geo. J. Stadler of Chicago, Ill., has purchased the Riger Ale Brewery from Ernst Fecker.

The Montgomery Brewery at Montgomery, Ala. by order of court will be sold on April 6.

It is reported that Chicago parties are figuring on erecting a large elevator at Wichita, Kan.

It is reported that Christian Brecht has bought Philip Grossman's brewery at Franklin, Pa.

Lewis Doll of Bellefonte has leased the Haas brewery at Roopsburg, Pa., and will operate it.

The Parsons Malting Co.'s malt houses at Sodus Point, N. Y., have a capacity of 500,000 bushels.

Jacob Bierbauer, a prominent brewer and miller of Mankato, Minn., died March 1, aged 77 years.

The William Buchheit Malting Co. of Watertown, Wis., has completed its new 125,000-bushel elevator.

M. Brand's brewery at Chicago was damaged by fire February 25 to the extent of \$35,000; fully insured.

The Seigler & Schiemann Brewing Co. has been incorporated at Chicago with a capital stock of \$15,000.

The William Schellhas Brewing Co. of Winona, Minn., has been dissolved, William Schellhas succeeding.

The Quinnipiac Brewing Co.'s ale brewery at New Haven, Conn., which it bought from Geo. Ringler & Co., is being torn down and part of the machinery

will be utilized in an addition to the former company's plant.

The John Wagner's Sons Brewing Co. has been organized to succeed John Wagner's Sons at Sidney, Ohio.

G. W. Abrams' granary at Pembine, Wis., was destroyed by fire recently. It contained 800 bushels of barley.

The Old Colony Brewing Co. has been organized at Fall River, Mass., and will erect a brewery at that place.

Heiselmann & Spinner, brewers of Kingston, N. Y., have been succeeded by the Heiselmann-Spinner Brewing Co.

The Tyrone Brewing Co., which was recently organized at Tyrone, Pa., has erected a new brewery which it will operate.

The National Brewing Co.'s plant at Chicago, Ill., has been sold to Wm. H. Rehm, secretary of the West Side Brewing Co.

The Finke-Wehn Brewing Co. has been organized at Burlington, Wis., with a capital of \$70,000 to succeed W. J. Finke & Co.

Wm. Stallman, of the firm of Stallman, Kunkler & Haug, brewers, of Ferdinand, Ind., has sold his interest to Theodore Gohman.

The C. H. Vinton Co., commission dealer in grain, etc., has been incorporated at Milwaukee, Wis., with a capital stock of \$10,000.

The Standard Brewing Co.'s plant at Baltimore, Md., was sold at auction recently to Chas. H. Fink for \$50,000. A new company may be organized.

The Milwaukee Malt & Grain Co. has completed the construction of an addition to its elevator at Milwaukee, Wis. It is 52x152 feet and has a capacity of 150,000 bushels of grain.

Part of a wall of the W. D. Matthews Malting Co.'s malt house at Leroy, N. Y., collapsed February 15. There was 10,000 bushels of malt in the house, the greater portion of which was saved.

The Utica National Brewing Co.'s plant at Utica, N. Y., was recently sold at auction to William F. Welch, of the Eagle Brewing Co. of Utica, for \$39,100. It is stated that a company will be formed to operate both concerns.

The Helm Brewing Co.'s elevator at Kansas City, Mo., was damaged by fire recently, entailing a loss of over \$15,000, which was fully covered by insurance. The fire was caused by an overheated journal in the top of the building.

The Sohngen Malting Co. of Hamilton, Ohio, are going to erect an elevator this spring which will have a capacity of 100,000 bushels. It will be equipped with modern machinery and will occupy a position west of the company's present buildings.

The revenue bill passed by the lower house of Congress provides for an increase to the tariff rates on barley from 30 to 45 cents, and on barley malt from 45 cents to 55 cents, also 15 per cent. to ad-valorem rates, which is based on the cost of the article.

An annual barley competition is held by Joseph Fison & Co., millers and merchants of the Eastern Union Mills, Ipswich, England. This year they offered 50 guineas in prizes to growers for the best samples. The larger maltsters and brewers of England no longer trust to the outside appearance of the barley or malt as formerly, but subject it to severe scientific tests, and if the English grain

fails to stand these tests, large orders for foreign barley are placed. Growers are beginning to realize this, and the samples of the 1895 crop show great improvement.

Ambrose Plamondon, president of the Chicago Pneumatic Malting Co., and of the Saladin Pneumatic Malting Construction Co. of Chicago, died of Bright's disease February 19, aged 62 years. He was born in Quebec, Canada, settled in Chicago in 1857, and has been prominently identified with industrial enterprises here.

The Martin Mason Brewing Co., of Hamilton, Ohio, has been incorporated with a capital stock of \$100,000, to succeed Martin Mason. The brewery will be enlarged. Marx Bros., brewers of Wyandotte, Mich., have organized a stock company with a capital of \$40,000 to conduct their business. The company will enlarge and improve its present plant.

The Wisconsin Malt & Grain Co. of Appleton, Wis., in rebuilding the malt house and elevator which burned some time ago, put in a complete equipment of fire apparatus, consisting of stand pipes, hose reels, fire escapes, etc. A test of the apparatus took place recently, when a stream from a 1½-inch nozzle was thrown over the flagstaff on the elevator, a height of over 150 feet, and a stream from a 2-inch nozzle was thrown over the elevator.

A recent report in the Commercial of Winnipeg on agricultural development in Manitoba states that barley is grown there principally as a feed grain; not because fine malting barley cannot be grown, but because farmers grow such a large area of wheat that they cannot give proper care to harvesting the barley, and it is often left so long in stook that it is darkened in color. Some very fine samples of barley are sometimes shown. The home breweries take a portion of the crop, and the balance is shipped to Eastern Canada, or used at home for feed. The following shows the acreage, yield per acre and total yield for several years: In 1883, acreage 60,281, yield per acre 30 bushels, total yield 1,898,430; in 1885, acreage 52,189, yield per acre 29 bushels, total yield 1,513,481; in 1890, acreage 66,035, yield per acre 31.33 bushels, total yield 2,069,415; in 1892, acreage 97,644, yield per acre 29 bushels, total yield 2,831,676; in 1894, acreage 119,528, yield per acre 25.87 bushels, total yield 2,981,716; in 1895, acreage 153,839, yield per acre 36.69 bushels, total yield 5,645,036.

#### DO NOT INSPECT BARLEY AT BOSTON.

*Editor American Elevator and Grain Trade:*—There are no rules governing inspection of barley here, as there is no barley trade in this market. All the barley which arrives here comes consigned direct to the brewers.

Yours truly, E. G. PRESTON,  
Secretary Chamber of Commerce.

Boston, Mass.

#### SOLD BY SAMPLE IN BALTIMORE.

*Editor American Elevator and Grain Trade:*—In this market barley is almost entirely controlled by the malt houses and breweries, and we see very little of it at Exchange. The small amount that is sold at the Exchange is always by sample. In fact, the business in barley on 'Change is so very small that the Directors did not deem it expedient to make grades. There is a Barley Committee, but it has little or nothing to do except in case of arbitration, for which there is seldom any occasion.

Yours respectfully,  
CHAS. McDONALD JR.,  
Chief Grain Inspector.

Baltimore, Md.

#### TRADING IN BARLEY AT DETROIT.

*Editor American Elevator and Grain Trade:*—Very little of the barley received here is inspected, most of it being bought by sample. Maltsters buy chiefly by sample or by grades of other markets, and do not have their stock reinspected here. However, the following rules govern when the grain is reinspected:

No. 2 Barley.—To weigh not less than 47 pounds to the bushel; to be in color and cleanness not lower than the standard furnished by the inspection committee.

No. 3 Extra Barley.—To weigh not less than 46 pounds to the bushel; to be sound and in color and



cleanness not lower than the standard furnished by the inspection committee.

No. 3 Barley.—To weigh not less than 44 pounds to the bushel; to be sound and reasonably clean.

Rejected Barley.—All barley that, from any other cause, is unsound, or largely mixed with other grain.

Respectfully yours, GEO. M. LANE,  
Detroit, Mich. Secretary Board of Trade.

#### BARLEY IS HANDLED BY SAMPLE IN SAN FRANCISCO.

*Editor American Elevator and Grain Trade:*—The bulk of the barley business of this market is done by sample. We have no rules governing the inspection of grain. Every year standards are made from the grain of that year's crop, and the inspector, when his services are demanded, grades grain in accordance with these standards.

Yours very truly,

T. C. FRIEDLANDER,  
Secretary Produce Exchange.

San Francisco, Cal.

#### BARLEY AT ST. LOUIS.

*Editor American Elevator and Grain Trade:*—There is very little barley inspected here. Practically all the receipts are bought by brewers and maltsters by sample and do not go into elevators, but direct to the breweries. The rules governing the inspection of barley are as follows:

No. 1 Fall.—To be plump, bright, sound and free from other grain.

No. 1 Spring.—To be plump, bright, sound and free from other grain.

No. 2 Fall.—To be sound and reasonably clean.

No. 2 Spring.—To be sound and reasonably clean.

No. 3 Fall.—To be reasonably clean and merchantable.

No. 3 Spring.—To be reasonably clean and merchantable.

Rejected.—To include all unsound and damaged barley.

Yours, GEO. H. MORGAN,  
St. Louis, Mo. Secretary Merchants' Exchange.

#### BARLEY INSPECTION AT MONTREAL.

*Editor American Elevator and Grain Trade:*—The inspection of grain, as of all other articles, is in this country governed by an act of the federal parliament, on the principle of one standard for the whole Dominion. The rules of the governmental classification of barley are as follows:

No. 1 barley shall be plump, bright, sound, clean and free from other grain.

No. 2 barley shall be reasonably clean and sound, but not bright and plump enough to be graded as No. 1, and shall be reasonably free from other grain, and weigh not less than 48 pounds to the bushel.

No. 3 extra barley shall be in all respects the same as No. 2 barley, except in color, weighing not less than 47 pounds to the bushel.

No. 3 barley shall include shrunken or otherwise slightly damaged barley, weighing not less than 45 pounds to the bushel.

No. 4 barley shall include all barley equal to No. 3, weighing less than 45 pounds to the bushel.

All barley which is damp, musty or from any cause badly damaged or largely mixed with other grain, shall be graded as "rejected."

Yours truly, GEO. HADRILL,  
Montreal, Canada. Secretary Board of Trade.

#### SOLD BY SAMPLE IN CINCINNATI.

*Editor American Elevator and Grain Trade:*—While I do not inspect barley consigned to the different breweries here, I do inspect the majority of what is consigned to the trade, although most of the barley is sold by sample, regardless of inspection. Why the grades are ignored I am unable to state.

The following rules govern grading of barley in this market:

No. 1 Winter.—Shall be sound, plump, clean, bright and free from other grain.

No. 2 Winter.—Shall be sound and reasonably clean, but not bright or plump enough for No. 1 (may be slightly broken), and reasonably free from other grain, and shall weigh not less than forty-eight (48) pounds to the measured bushel.

No. 3 Winter.—Shall include shrunken or otherwise slightly damaged barley; may be slightly mixed with other grain, but not unfit for malting, and shall weigh not less than forty-four (44) pounds to the measured bushel.

Extra No. 3 Winter.—Shall be sound, and may be somewhat stained, but otherwise, except as to

weight, equal to No. 2, and shall weigh not less than forty-six (46) pounds to the measured bushel.

No. 1 Spring.—Shall be same as No. 1 Winter.

No. 2 Spring.—Shall be same as No. 2 Winter.

No. 3 Spring.—Shall be same as No. 3 Winter.

Extra No. 3 Spring.—Shall be same as Extra No. 3 Winter.

Rejected.—Shall include all winter or spring barley, unsound, or below the above standard in other respects.

Yours respectfully, H. CHISMAN,  
Cincinnati, Ohio. Grain Inspector.

#### BARLEY TRADING AT PEORIA.

*Editor American Elevator and Grain Trade:*—All barley is graded here, also sampled and sold by sample to buyers. The grading of the inspector rules if it is not sold on arrival or stored in special bins. Otherwise, in going to elevator, similar grades are run together in the same bins. If the grading of the inspectors is not heeded by buyers it is because the judgment of the purchaser or seller dictates otherwise; also it may depend upon what special use the buyer may desire to make of his purchases.

The grading rules are as follows:

No. 1 Barley.—Shall be plump, bright, sound, clean, and free from other grain.

No. 2 Barley.—Shall be sound, bright, not plump enough for No. 1, reasonably clean, and reasonably free from other grain.

Extra No. 3 Barley.—Shall include slightly shrunken and otherwise slightly damaged barley not good enough for No. 2.

No. 3 Barley.—Shall include shrunken and otherwise damaged barley weighing not less than 41 pounds to the measured bushel.

Rejected Barley.—Shall include all barley which is not good enough for No. 3.

No Grade Barley.—Shall be all barley unfit for a higher grade.

Truly yours, R. C. GRIER,  
Peoria, Ill. Secretary Board of Trade.

#### BUY BY SAMPLE AND GRADES IN MILWAUKEE.

*Editor American Elevator and Grain Trade:*—Nearly all of the barley sent here on consignment for sale is inspected on track upon its arrival. Our large brewers and maltsters have some of their barley purchased in other markets, switched directly to their plants without inspection. Such barley as is consigned and on sale is handled after inspection by a sample being taken from each car and displayed on the sample tables of the Chamber of Commerce. The buyers in making their purchases use the grade as given by the inspectors, as well as their own judgment as to its merits.

These grades are as follows:

No. 1 Barley.—Shall be of a bright, natural color, plump, sound, well cleaned, and free from other grain.

No. 2 Barley.—Shall be sound and reasonably plump, reasonably clean and free from other grain—good malting barley, but may be slightly stained.

Extra No. 3 Barley.—Shall comprise barley that is slightly unsound, or too much stained or shrunken for No. 2, but otherwise meeting the requirements of that grade.

No. 3 Barley.—Shall include shrunken, discolored, but reasonably sound barley, and fit for malting purposes.

No. 4 Barley.—Shall include all barley for any cause unfit for No. 3, but fit for warehousing.

Barley of the varieties known as "Chevalier" and "Bay Brewing" shall be so designated when inspected of the several grades above and including No. 3, and shall conform in all respects to the foregoing requirements for the various grades. This shall be considered as establishing separate grades for the varieties designated.

Barley of a newly harvested crop is designated as "new" when inspected prior to September 1, after that date is considered new unless otherwise specified.

Only a small percentage of our barley goes to regular elevators on grade. Our principal shippers have private elevators of their own for the handling and storage of their purchases, and our maltsters and brewers have their own storage facilities. Therefore it is more convenient for them either to take it from the track by wagon or, if they have side track facilities, have it switched. They save the elevator charge of three-quarters of a cent per bushel, which would have to be paid if the barley went to regular houses. Besides this, there is a certain amount of prejudice in the minds of barley dealers against grain in regular houses, and this, also, has some influence in making nearly all transactions by sample. Every

barley man has a high opinion of his own knowledge of the real merits of the grain, so that when they buy by sample and put it in their own houses they feel more certain that they have got what they want.

Respectfully yours,

FRANK D. HINKLEY,  
Milwaukee, Wis. Chief Grain Inspector.

#### BOUGHT BY SAMPLE IN NEW YORK.

*Editor American Elevator and Grain Trade:*—In this market barley is usually bought by sample. The bulk of the barley trade here is done by the brewers and maltsters, and they prefer to buy by sample because they can tell just what they will get, while if they bought by grade they might get the top or bottom of the grade. The barley is graded by inspectors excepting that which is billed "Not to be graded." If Canada barley is billed "To be graded," then we grade it; otherwise we do not.

The following rules govern the grading:

No. 1 Bright.—Shall be of a bright, natural color, plump, sound and well cleaned, weighing not less than 49 pounds to the measured bushel.

No. 1 Canada Barley.—Shall be of a bright natural color, plump, sound and well cleaned, weighing not less than 48 pounds to the measured bushel.

No. 2 Canada Barley.—May be slightly stained, otherwise sound, reasonably clean, weighing not less than 47½ pounds to the measured bushel.

No. 3 Canada Barley.—Shall be sound, fit for malting, that will not grade No. 2 or better.

No. 1 State Barley, Four-rowed.—Shall be of a bright, natural color, plump, sound, and well cleaned, weighing not less than 48 pounds to the measured bushel.

No. 2 State Barley, Four-rowed.—Shall be plump, sound, reasonably clean, but may be slightly stained, and weighing not less than 46½ pounds to the measured bushel.

No. 3 State Barley, Four-rowed.—Shall be sound, reasonably clean, fit for malting, otherwise unfit for No. 2, and weighing not less than 44 pounds to the measured bushel.

No. 1 State Barley, Two-rowed.—Shall be of a bright, natural color, plump, sound and well cleaned, and weighing not less than 49 pounds to the measured bushel.

No. 2 State Barley, Two-rowed.—Shall be sound, reasonably clean, but in color not good enough for No. 1, and weighing not less than 48 pounds to the measured bushel.

No. 3 State Barley, Two-rowed.—Shall be sound and fit for malting, but in color and cleanliness unfit for No. 2.

Rejected Barley. Shall be such as is for any reason unfit for No. 3.

No. 1 Western Barley.—Shall be plump, bright, sound, clean and free from other grain, weighing not less than 48 pounds to the measured bushel.

No. 2 Western Barley.—Shall be sound, bright, not plump enough for No. 1, reasonably clean, and reasonably free from other grain, weighing not less than 48 pounds to the measured bushel.

Extra No. 3 Western Barley.—Shall be the same as No. 2 Western Barley in all respects, except as to color, which may be dark.

No. 3 Western Barley.—Shall include shrunken, or otherwise slightly damaged barley, weighing not less than 44 pounds to the measured bushel.

Rejected Western.—All Western barley which is damp, musty, or from any cause is badly damaged, or largely mixed with other grain, shall be graded Rejected Western.

Yours respectfully,

G. H. K. WHITE,  
New York, N. Y. Inspector in Chief.

#### TRADE BY SAMPLE AT BUFFALO.

*Editor American Elevator and Grain Trade:*—Barley is all sold by sample in this market. It is inspected only when so ordered. Buyer and consumers of barley are harder to educate to the benefits of inspection than are buyers of any other grain.

The rules governing the grading of barley in this market are as follows:

WESTERN BARLEY.

No. 1 Barley.—Shall be plump, bright, clean, and free from other grain.

No. 2 Barley.—Shall be sound, of healthy color, not plump enough for No. 1, reasonably clean and reasonably free from other grain.

No. 3 Barley.—Shall include slightly shrunken, and otherwise slightly damaged, not good enough for No. 2.

No. 4 Barley.—Shall include all fit for malting purposes, not good enough for No. 3.

No. 5 Barley.—Shall include all which is badly damaged or from any cause unfit for malting purposes, except that barley which has been chemically treated shall not be graded at all.

Scotch Barley.—The grades of Nos 1, 2 and 3 Scotch shall correspond in all respects with the



grades of Nos. 1, 2 and 3 except that they shall be of the Scotch variety.

#### CANADA BARLEY.

No. 1 Barley.—Shall be plump, bright, sound, clean and free from other grain.

No. 2 Barley.—Shall be reasonably clean and sound, but not bright or plump enough for No. 1, and reasonably free from other grain.

No. 3 Barley.—Shall include shrunken or otherwise slightly damaged, weighing not less than forty and one-half (40½) pounds to the measured bushel.

Extra No. 3 Barley.—Shall be reasonably clean and sound, but not bright or plump enough for No. 2, and reasonably free from other grain.

Rejected Barley.—All which is damp, musty, or from any cause badly damaged, or largely mixed with other grain shall be graded as rejected.

#### STATE BARLEY.

No. 1 Six-rowed State Barley.—To be of a bright natural color, sound, clean, and to weigh not less than forty-eight (48) pounds to the measured bushel.

No. 2 Bright Six-rowed State Barley.—Shall be of a bright, natural color, sound, clean, and to weigh not less than forty-six (46) pounds to the measured bushel.

No. 2 Six rowed State Barley.—Shall be sound, clean, of good color, and to weigh not less than forty-five (46) pounds to the measured bushel.

Extra No. 3 Six-rowed State Barley.—Shall be sound, reasonably clean, and to weigh not less than forty-five (45) pounds to the measured bushel.

No. 3 Six-rowed State Barley.—Shall include all shrunken, discolored, but reasonably sound and fit for malting purposes.

Rejected Six-rowed State Barley.—Shall be the same in all respects as Rejected Canada.

No. 1 Two-rowed State Barley.—Shall be sound, clean, bright, and to weigh not less than forty-eight (48) pounds to the measured bushel.

No. 2 Two-rowed State Barley.—Shall be sound, reasonably clean, of good color, and shall weigh not less than forty-eight (48) pounds to the measured bushel.

No. 3 Two-rowed State Barley.—Shall include all light, stained, but reasonably sound, that is fit for malting purposes.

Rejected Two-rowed State Barley.—Shall include all unsound.

Yours respectfully,

CHIEF GRAIN INSPECTOR.

Buffalo, N. Y.

Per Miller.

#### THRASHING MALTING BARLEY.

A writer in a foreign journal appropriately dwells upon the importance of regularity of germination in malting barley, and reminds us that while it is easy to lower the character of a barley by an admixture of defective grains, it is impossible to make a bad sample good by the converse process.

Examination of non-germinating grains shows that in a goodly number the germ has suffered physical injury by bruising or crushing, which prevents its development and offers a favorable opportunity to the ever active mold spores. Since this damage is occasioned by the thrashing machine, it is advisable that in thrashing out malting barley the bedding should not be set so close to the drum. The excuse for close setting is that the grain adheres firmly to the straw, particularly when the latter is damp, and if the machine be set at all wide a good deal will pass through untouched. Barley intended for malting should, however, be as dry as possible before thrashing, in order to avoid the necessity for close setting, particularly as damp grains are more readily split and damaged, and that, too, in such a manner that neither riddles nor blower can separate them from the sound grain.

#### SHORT WEIGHT BILLING OF SHIPMENTS.

The Western Railway Association has been engaged in quietly investigating frauds perpetrated on the railroad companies in the association and has now completed its work with the result that the Federal grand jury in Milwaukee Wednesday found indictments for violating the Interstate Commerce laws against the grain and malt firm of Berger Renig Company, of Fond du Lac, Wis.

This is to be a test case, and if conviction follows there will be trouble for prominent shippers in the Western States. There are several charges in the indictments against the Fond du Lac firm, the crime charged against them being the furnishing of false weights to the association. By the rules of the association shippers who have entered into contracts with the body are enabled to make shipments that pass over several lines without having the cars weighed in transit, thereby saving time and money

in the sidetracking and weighing to the different junction points. The company is supposed to furnish actual weights, but the association found a short time ago that many shippers were taking advantage of the arrangement by furnishing false weights and so robbing the railroads of thousands of dollars.

When the invoice books of suspected firms were examined the weights found there tallied with those furnished the railroads, but on weighing the cars the association found that there was a big discrepancy. It was then found that the shippers prepared false invoice books for the benefit of the association. This is the procedure by which the Wisconsin firm was successful before the suspicions of the association were aroused. Investigation has shown that the same deceit is being practiced quite extensively throughout the Northwest, and the shippers are to be dealt with accordingly unless there is a settlement out of court, for the shippers to a great extent know that the fraud has been discovered.

#### ACREAGE AND YIELD OF BARLEY.

The following table exhibits the acreage and yield of barley in the United States during 1895, as reported by the Department of Agriculture, compared with the yield of 1894:

States and Territories.	1895.		1894.
	Acres.	Bushels.	Bushels.
Maine.....	12,607	408,467	373,909
New Hampshire.....	5,335	136,576	123,976
Vermont.....	18,668	619,778	505,660
Massachusetts.....	1,839	41,378	39,516
Rhode Island.....	381	8,954	11,100
New York.....	239,005	5,473,215	4,546,290
Pennsylvania.....	12,814	258,843	279,893
Texas.....	2,484	53,654	38,388
Tennessee.....	2,491	57,542	36,184
Kentucky.....	2,672	88,978	107,998
Ohio.....	29,244	824,681	936,453
Michigan.....	69,356	1,255,344	1,552,972
Indiana.....	6,811	102,165	156,658
Illinois.....	17,645	352,900	647,895
Wisconsin.....	370,938	10,868,483	12,480,983
Minnesota.....	484,369	17,437,284	10,840,644
Iowa.....	453,031	12,684,868	7,716,458
Missouri.....	940	14,382	11,438
Kansas.....	17,942	258,365	142,243
Nebraska.....	49,051	1,393,048	340,963
South Dakota.....	130,445	2,543,678	721,286
North Dakota.....	290,766	8,839,286	4,058,612
Montana.....	5,701	142,525	116,618
Colorado.....	14,290	447,277	345,443
New Mexico.....	1,852	51,856	41,661
Arizona.....	10,165	261,241	249,150
Utah.....	6,366	190,980	207,999
Nevada.....	8,180	262,578	253,175
Idaho.....	10,606	259,847	335,682
Washington.....	52,070	1,942,211	1,595,223
Oregon.....	34,782	768,682	1,369,991
California.....	937,127	19,023,678	11,216,004
Total.....	3,299,973	87,072,744	61,400,465

#### STORING BARLEY.

At this time of the year many maltsters hold large stocks of barley, in many instances almost sufficient to complete the season's work, says the Country Brewer's Gazette. English farmers as a class do not permit the grain to remain long in stack, but thrash it out, and place it upon the market in order to realize capital for current expenses. Storage under suitable conditions, considerably improves the growing powers of the grain, but careless storage is highly detrimental.

Unless barley is very dry, lengthy storage is dangerous, owing to the risk of the grain becoming heated, whereby a fusty smell is developed, and the vitality of the germ imperiled. The same danger, but probably in a lesser degree, would arise if dry barley was stored in a draughty damp room. Where barley is kept in large quantities, it is usual to have wooden bins; these should be carefully made, and protected from contact with moist air. We have frequently seen bins constructed, of which the bare brick walls of the maltings formed one or more sides. This is obviously foolish, particularly if the wall happens to be an outside one. Bricks are extremely porous, so that moisture, more or less, according to the humidity of the weather, is certain to be imparted to any grain stored near.

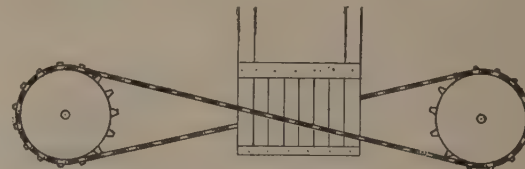
If an outer wall conveniently forms one side of a bin, it should be boarded down, and the boards should be fixed an inch or more from the bricks, so that air can freely pass between them. Unless bar-

ley comes to hand very dry, it should never be binned until it has been placed upon the kiln, and all excess moisture expelled. Under such treatment barley may be stored for several months without undergoing any deterioration, or without endangering the vital action of the germ. As a matter of fact, many samples of barley are enormously improved by artificial sweating, followed by dry storage; the germ is developed and its vital energy increased; germination is rendered steadier and more regular, and the grain mellow and matures better.

#### CROSS SPROCKET CHAIN DRIVE.

BY W. G. JOHNSONE.

The sketch shown in the cut given herewith represents a cross sprocket chain chain that I have used successfully for several years. It will work on ele-



vator shafting where it is needful to drive a line of elevators in a direction opposite to the driving shaft.

The chain is applied without a twist by linking it together, reversed sides. The dividing board is to keep the chain apart, and should be hung nearest to the drive end and sprung when bracing so that the chain will glide evenly along on both sides. This plan will work well where the shafting is ten or more feet apart, the greater the distance the better.

#### WILL REQUIRE USE OF METRIC SYSTEM.

Bills have been introduced in the English Parliament as well as in the House of Representatives requiring the use of the metric system of weights and measures. While it is not probable that either bill will become a law soon, it seems certain that before many years have passed the metric system will be the only legal system of weights and measures. The bill introduced in the House of Representatives by Denis M. Hurley of Brooklyn, N. Y., is entitled a bill to fix the standard of weights and measures by the adoption of the metric system of weights and measures. It was read twice, referred to the Committee on Coinage, Weights and Measures and ordered to be printed. It is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that from and after the first day of July, 1897, all the departments of the government of the United States, in transaction of all business requiring the use of weight and measurement, shall employ and use only the weights and measures of the metric system, as legalized by act of Congress approved July 28, 1866.

Sec. 2. That from and after the first day of July, 1899, the metric system of weights and measures shall be the only legal system of weights and measures recognized in the United States.

Sec. 3. That the tables in the schedules annexed to the bill authorizing the use of the metric system of weights and measures, passed July 28, 1866, shall be the tables of equivalents which may be lawfully used for computing, determining and expressing in customary weights and measures the weights and measures of the metric system.

Daniel Mahoney, formerly grain buyer at Howard, S. D., for W. W. Cargill & Co., has brought suit against the firm for \$10,000 damages. He alleges that the elevator was in very bad repair and as a result grain leaked through the cracks in the floors and bins; that the condition of the building was reported to the company, but it failed to make the necessary repairs. Grain amounting in value to \$443.49 is alleged to have disappeared through the cracks, and the company demanded that Mahoney make good this sum. He refused, retired from the company's employ, and alleges that the firm has persecuted him to such an extent that he has been unable to procure other employment.



## QUERIES: AND: REPLIES

[Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.]

### No. 00. Information Regarding Marine Legs.

We notice that the **AMERICAN ELEVATOR AND GRAIN TRADE** gives the country elevators, transfer and terminal elevators lots of attention, while elevators for taking grain from vessels, marine legs, and that sort of thing have had to go by. We suppose that section of the trade is a humble minority, but we are more interested in the latter subjects. We would like to look into the subject of marine legs for elevators and would be greatly obliged for any information regarding them, or if someone would tell us where such information could be obtained.—**FOWLER & CALHOUN**, St. John, New Brunswick.

## Trade Notes

He advertised "Boys wanted  
To work around the store,"  
And found when he got home that night  
His wife had furnished four.

J. Murray Case, who was connected with the mill furnishing business for a number of years, has a new wheat cleaner which he intends to put on the market soon.

A gasoline tank in the engine room of the Racine Hardware Co. at Racine, Wis., exploded March 3 and caused a serious fire besides injuring many of the workmen.

The Department of State has been officially notified that an international exhibition of agricultural machinery will be held at Vienna, Austria, from the 9th to the 14th of May, 1896.

The Comins Manufacturing Company, engaged in the manufacture of gas and gasoline engines, at Sandusky, Ohio, has gone into the hands of a receiver. Assets, \$26,843; liabilities, \$17,064.

The B. S. Constant Co. of Bloomington, Ill., writes us that it is very busy making plans for new elevators, and also for remodeling old elevators into what is known as the B. S. Constant system of grain elevators.

The Decatur Gasoline Engine Co. of Decatur, Ill., whose advertisement appears in this issue, wishes to call attention to the Walls Engine, which it manufactures, and which is said to be especially adaptable for elevator work.

The Todds & Stanley Mill Furnishing Co. of St. Louis, Mo., intends to remove part of its plant to a new building to be erected near its foundry in East St. Louis, Ill. The offices and several departments of the works will remain in St. Louis.

The Van Duzen Gas & Gasoline Engine Co. of Cincinnati, Ohio, has been reorganized and is perfecting its engine which will be placed on the market shortly in an improved condition. The engine will be built from 1/2 horse to 30 horse power.

The Link-Belt Machinery Co. of Chicago has issued its catalogue No. 20 of Link-Belt elevating and conveying and electric coal mining machinery. The book is finely illustrated, and moreover is of the size recommended by the American Society of Mechanical Engineers for a standard size of machinery catalogues, 6x9 inches.

The Dayton Gas Engine and Mfg. Co. of Dayton, Ohio, has moved its office and factory to new and commodious quarters in the Kinnard Building. The company occupies three floors and the works are kept running day and night in order to fill orders. A carload of engines of sizes ranging from two to thirteen horse power was recently shipped to Pittsburg, Pa.

The J. J. Norman Co., of Chicago, Ill., manufacturer of the Chicago Gas & Gasoline Engine, is building an entire new factory which will have double the capacity of the old plant. When the new building is completed the company will have one of the largest factories for building gas engines of

any in the United States. The engines made by the company range from 2 to 50 horse power.

The S. Howes Co. of Silver Creek, N. Y., writes us that trade is very good, showing quite an improvement over the first months of 1895.

Moore & Lorenz of Chicago, Ill., have secured the agency of the "Salem" elevator bucket manufactured by J. W. Clark of Salem, Ohio, and will sell them in connection with buckets of their own make. They report a number of sales of their patent troughs and numerous inquiries for their new sheet steel conveyor box.

The Howes Grain Cleaner Co. of Silver Creek, N. Y., has recently been organized by several gentlemen formerly connected with the Eureka Grain Cleaning Machine Works. C. N. Howes, for more than 25 years connected with the Eureka works, will be president of the new company, with Elgin Keith, for more than 20 years connected with the Eureka Works, as superintendent. C. A. Lanphere will have charge of the iron working department. The board of directors is composed of August Heine, Elgin Keith, Theodore Gresho, G. P. Brand, C. N. Howes, C. S. Lanphere and J. N. Bacon. The managers of the Howes Grain Cleaner Co. certainly bring into their enterprise a thorough knowledge of the business. Improvements which they have planned will be incorporated in the machines built at the new works, which they expect to have in operation in a short time.

### ANOTHER PART OF THE COMMERCE LAW SUSTAINED.

The decision of the Supreme Court of the United States sustains the Interstate Commerce law in its most rigid provisions, and makes it possible now to subject the railroads of the country to absolute government control.

It looked at one time as if this law was to have no effect whatever, except as voluntarily complied with, and that it had great loopholes through which the railroad managers could escape the penalties imposed by it. But the supplementary act of Congress of Feb. 11, 1893, closed those loopholes, and the Supreme Court has now sustained that act.

One of the principal objects of the Interstate Commerce law was to exact from the railroad companies absolute fairness of treatment between the small shipper and the great, and that the one should pay no higher freight rate than the other. For years it has been well known that the great shippers had immense advantages in these respects over their smaller competitors, and were consequently often able to crush them out. It was usually done by the rebate system, and this the law forbade.

But how to prove how or when rebates were given and received was the question. It was apparently impossible to convict these roads of violating the law, for when any person concerned in the transaction was summoned as a witness he would say that to answer the question would criminate himself, and this he could not be compelled to do under the constitution of the United States.

In the Counselman case, that went up from Chicago, this view of the law was sustained by the Supreme Court, and in consequence of that decision it was supposed that the interstate law was a dead letter.

But Congress passed the act of February, 1893, in which it was provided, in substance, that a person should be compelled to answer all questions touching the violation of the law, whether it criminated himself or not, but that he could not be prosecuted in respect to the unlawful transactions of which he testified. Of course if he did not testify truthfully he could be indicted for perjury, but he could not be prosecuted for having violated the Interstate Commerce law. This is the law that has just been sustained by the court and will now bring the railroad officials and the shippers within the penalties of the law should they continue to violate it.

Elevator and storehouse fires occurring in Canada in 1895 are reported by the Insurance and Finance Chronicle to have numbered fourteen, the loss upon which was \$98,500, and insurance \$88,600.

### YIELD OF CORN AND KAFFIR COMPARED.

BY F. D. COBURN, SECRETARY KANSAS DEPARTMENT OF AGRICULTURE.

As the sorghums, and more especially the non-saccharine sorts, are attracting wide attention now the fact that Kansas is having a larger experience with them than any other state (232,498 acres in 1895, and likely to be doubled in 1896), brings innumerable requests from all points of the compass for information as to their characteristics, growth, uses and values compared with those of other crops raised for similar purposes.

The foremost of these sorghums in popular esteem appear to be the red and white Kaffir corn. For seven years, beginning with 1889, the Kansas Experiment Station, at Manhattan, has grown Indian corn and red Kaffir corn side by side for the purpose of testing their comparative yields of both fodder and grain. The following table compiled by Mr. F. C. Burtis, of the Station, who has had oversight of the work, shows the annual yield of each:

Year.	Red Kaffir Corn.		Corn.	
	Grain per acre. Bushels.	Stover per acre. Tons.	Grain per acre. Bushels.	Stover per acre. Tons.
1889....	71.00	9.00	56.00	2.50
1890.....	19.00	4.20	22.00	2.50
1891.....	98.00	6.00	74.00	2.95
1892.....	50.00	5.00	30.00	4.55
1893.....	49.00	5.25	30.00	1.75
1894.....	00.00	2.00	00.00	1.00
1895.....	43.07	1.53	22.76	1.64
Averages	*55.01	4.71	*39.12	2.41

\* Average of six years.

By this it is seen that the yield of Kaffir corn was very much larger than that of corn in five out of six years, and the same as to the Kaffir corn for age every year. In fact the Kaffir corn yielded about 41 per cent. more grain, and nearly 95 per cent. more fodder than the corn. The poor showing for both varieties in 1890 was due to a destructive frost September 12. In 1894 the failure of grain in both varieties was due to there being no appreciable rain from the middle of July to September 1, and the fact that the crops side by side on alternate plats were in a poor upland prairie soil underlaid with hardpan. Yet, under these adverse circumstances the Kaffir corn yielded double the quantity of fodder that was obtained from the corn. As Mr. Burtis says, "such dry weather kills the corn, and it must then be cut, but the sorghums live on; although the growth may be checked the crop matures."

Mr. Burtis presents the further conclusions from his experience up to the present time: "For the combined purpose of raising the largest yield of grain and a fair quantity of stover, it is a fact beyond doubt that the red and white Kaffir corns are superior to any of the non-saccharine sorghums and the sugar (sorghum) canes. The latter will produce more hay or fodder, and of a little more palatable quality, than the Kaffir corns, and are preferred by many on account of this fact when hay or fodder is the sole object. Although there is a great deal said about which is the best, the red or the white, I believe when the proper comparison is made, the conclusion will show but very little difference, at least not as much as was first supposed. Aside from the color, there is a much greater difference between the different strains of the same variety than there is between the red and white varieties. A few who have kept their seed pure and carefully selected can testify to this when they have been, for some reason, forced to buy seed outside and got hold of some poor stuff. These sorghums are very susceptible to cross fertilization and modification, and there will be a rapid improvement or deterioration, according to the care that is exercised in selection of seed. Much of the Kaffir corn seed that is offered for sale is not the best. One may get as much difference in results from Kaffir corn seed procured from two sources as between a very good variety of corn and a poor one."

The first week of March was a busy time for Chicago bucket shops—furnishing bail bonds and changing firm names on office doors.





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## MITCHELL BROS. COMPANY

(INCORPORATED.)

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HARLEY B. MITCHELL.	-	-	-	Editor.
HARLES S. CLARK.	-	-	-	Assistant Editor.

Subscription Price,	-	-	-	\$1.00 per Year.
English and Foreign Subscription,	-	-	-	1.50 " "

## ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

## CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MARCH 15, 1896.

## WILL COMPEL USE OF METRIC SYSTEM.

A bill has been introduced in the House of Representatives, and a similar bill in the House of Commons, England, to provide for the compulsory use of the metric system after a year or two. As is stated in the bill introduced by Congressman Hurley, which is given in full elsewhere in this number, the metric system was legalized by Congress thirty years ago, and since then we have had several legal systems of weights and measures.

It is now proposed to simplify our systems by discarding all but the metric system and making it the only legal system recognized in the United States. The system is already used exclusively by some, and it is the intent of the bill to bring about the enforced use of the system gradually. The grain trade, which is now encumbered with so many different standard weight bushels which have been illegally thrust upon it by state legislatures, will be greatly relieved and our export trade as well as our domestic trade facilitated by the use of one simple system throughout the land. Congress alone has the power to fix weights and measures so the confusing state standards would be ignored.

The metric system is used more extensively than any other and if the bills introduced in Congress and the British Parliament are passed its compulsory use in the United States and Great Britain commences about the same time. If uniform action on this matter could be had by both governments, the introduction of the system would be much easier for the people. The trade between the two countries is enormous,

and a change of systems in one without a like change in the other would cause dire confusion.

The opponents of the bill find no fault with the system, but admit that it is greatly superior to the various systems now in use. The only argument advanced against the system is that the change would cause a world of trouble and it would be a long time before the people would become familiar with the system.

## SELLING BARLEY BY SAMPLE.

In our department devoted to Barley and Malt this number, will be found communications from several markets to the effect that the barley business is conducted almost entirely by sample. Barley buyers do not seem to be disposed to depend upon the judgment of the regular authorized grain inspector or to heed his grading. As buyers frequently pay 5 to 10 cents more a bushel for a lot of No. 3 than a No. 2 they cannot be charged with insincerity. Surely there must be something in their claim of unreliable gradings, else they could never afford to pay a premium of 10 cents for the lower grades.

The barley may have been graded strictly according to the department rules governing its inspection and yet the grading be of no value to the trade. Philadelphia, Baltimore and some other markets have no rules governing the inspection of barley, simply because the barley buyers doubted the ability of the regular inspectors to grade barley uniformly or according to real value, and yet some of the barley buyers claim that the work of determining the quality of barley is almost an exact science. With a grain tester they determine its weight per bushel and with a grower they determine the per cent. of grains which will sprout. The color and thickness of the bran, as well as the plumpness of the berry, are readily determined by comparison with standard samples. The per cent. of foreign matter in the grain is easily determined by weighing a sample, removing the foreign matter and reweighing it.

As the present grading of barley is useless to the buyer and an expensive delusion to the country shipper it has been suggested that the inspection department provide an expert barley man with all the necessary utensils for properly determining the value of barley and give him a room wherein to inspect and report on samples taken by the regular track inspectors. This has been objected to on the ground that it would take too long. The objectors seem to forget that it would take no longer than it now takes the buyers. Unless some new and quicker method were devised for determining the per cent. of grains that would germinate, it might be impractical for the inspector to attempt to pass upon this property of the sample. However, this difficulty could be overcome by instructing country shippers to send the inspector a large sample of the barley by mail same day car is loaded so the per cent. of grains that will grow could be determined before the car's arrival. The other essential properties could be determined from the sample taken by the track inspector.

The barley inspector would not grade barley but simply report on its weight per measured bushel, its per cent. of foreign matter, its per

cent. of germination, plumpness and color. Each of these properties can be determined accurately and in fairness to the country shippers the inspectors who are paid to pass upon the quality of the barley received should do the work. Either Chicago or Milwaukee are advantageously located to double its barley trade by instituting reforms in the inspection of barley which shall make the inspector's grading of value to the trade.

Next month we shall have reports from other markets and would be pleased to have opinions from those connected with the barley trade or in any way interested in the reforms needed to make the work of the inspectors of value.

## ROUTING EXPORT GRAIN.

The elevator storage charges at Buffalo and New York are in excess of those in force at any other important grain center of the country and should be reduced. The New York state legislature enacted a law 8 or 9 years ago providing for a reduction of the charge for transferring grain to one-quarter of a cent a bushel, but the elevator men still charge seven-eighths of a cent and get it. If this illegal charge was reduced to the one provided for by the state law Western exporters would often be able to ship grain abroad at a profit, for such a reduction would make a difference of 1 1/4 cents a bushel. However, there are other exorbitant charges which weigh just as heavily upon the export grain sent via New York which should be reduced. It is no wonder that export grain is going via other ports.

The routing of export grain is not dictated by sentimentalism, but by cost, and will be as long as our exporters have to compete in the European markets with the grain exporters of other surplus grain countries. Hence it is natural that the export grain trade should seek the cheapest route. Petitioning trunk lines to reduce rates to New York and advance rates to other ports ill becomes New Yorkers as long as the old-time charges are maintained at home.

## THE IOWA WAREHOUSE LAW KILLED.

The warehouse bill which the Iowa legislature has been considering for some time has been killed. In fact, we have just learned that it was voted on the 12th instant and lost. A good many copies of this journal containing the proposed bill were sent to different grain dealers in Iowa and some favored us with their opinions on it early enough to publish in this number. No doubt many of our readers made haste to express some very positive opinions to their representatives as soon as they learned of the useless and expensive service the bill was intended to provide.

Anyone familiar with the needs of the grain trade can readily discern, with one reading of the bill, that it was not drawn up by one who knew anything regarding the grain business. It was garbled from the warehouse laws of adjoining states, without any attention being given to the practices of the trade within the state. No honest work was done with the expectation of benefiting either the grain grower or dealer. The prime purpose of the politicians was to throw a



sop to the farmers. If they had succeeded the farmers would have cursed them, as soon as the true effect of the law had been learned. If the Iowa grain dealers had six or eight more strong district associations that would work together for the advancement of common interests the bill would have been killed much sooner than it was.

### RECEIVING FARMERS' GRAIN FOR STORAGE.

The elevator man who receives grain in store and contracts to buy it at the market price ruling on day owner desires to sell frequently puts his neck in a loop by shipping out the grain and selling it. A sudden rise in the market price is sure to be followed by a stampede of holders of storage certificates for their grain or its price, and the elevator man is often called upon to pay much more for the grain than he sold it for.

If he collects a fair charge for storage he has a much better chance of closing the deal without a loss than that other foolish grain dealer who contracts to buy grain without knowing its quality or quantity. He knows both and in return for the put he recklessly gives the farmer he gets storage charges and the use of the capital until the farmer desires to sell. By keeping the grain so contracted for in store, either in his own house or at a terminal market, his chance of suffering a loss on the deal is small and it is his privilege to make it bring him a good storage charge. The elevator man who thinks it is necessary to give storage free is to be pitied.

### CONTRACTING TO BUY FARMERS' GRAIN.

Country grain dealers in their eagerness to secure the farmers' grain have permitted an abuse to fasten itself upon the business, which they will experience some difficulty in removing. No doubt competition in a market overcrowded with buyers was responsible for the dealer's first contracting for a farmer's crop without examining it as to quality and quantity, but of late years many dealers in markets where such a practice is not prompted by competition have bought crop after crop from the farmers, on this plan. It is no wonder they shake their heads and puzzle over their inability to make a living out of the business.

If dealers would refuse to buy any grain in excess of that brought to market they would be much better off in the long run. Although apparently oblivious of the fact, some of them give away puts without limit as to quantity or day—a thing the most reckless gambler in privileges would hesitate to do even at any price.

When the farmer comes in to make a contract for the sale of his grain he brings a sack full (of course the sack was filled at random, and not with selected grain) to show the prospective buyer what the quality is like. The farmer guesses at the quantity and the dealer contracts, generally verbally, to buy all the grain at the price ruling in the market that day. If the market goes down the quantity swells wonderfully, yet the innocent buyer never suspects that he is getting considerable grain from the honest toiler which did not grow on his farm. If the market goes up the crop of the farmer shrinks in proportion to the advance and the neighbor who

sold and delivered all his grain before the rise, suddenly discovers that he has some grain to sell at the advanced figure. The dealer may perceive that the grain is very much like that he bought of the other farmer, but policy will dictate that he keep his suspicion to himself.

A few of these contracts are not limited as to time for delivery, others require the delivery of the grain within one, two or three months. In either case the contract is very one-sided in that the farmer has all the advantage. He can deliver as little or as much as he desires. If he chooses he can default on the contract and the dealer is without recourse. The measure of damages, if either defaults, would be the difference between the contract price and the price ruling at the time of the default.

Either can sue for the recovery of damages and the farmer generally sues, but the dealer is restrained from bringing suit by the fear of losing the patronage of many other farmers. He knows that the farmers' sympathies are for one another, and their prejudices against the regular grain dealer, so he accepts the loss and privately vows that he will contract to buy no more grain from that farmer. In the long run, the dealer who contracts to buy for future delivery farmer's grain unseen may depend upon losing many times what he makes by such speculation. The only safe plan is to buy as it arrives and is personally inspected.

The Chicago Board of Trade members are talking of a plan to trade in 1,000 bushels of wheat. The adoption of such a plan would surely pave the way for many country elevator men and millers to hedge against their small holdings and would bring much more business to the Board.

An effort is being made to induce Congress to enact a law providing for a retaliatory duty discriminating against the goods of countries which discriminate against the grain and agricultural products of the United States. A special subcommittee of the Ways and Means Committee has been appointed to investigate the advantages gained by reciprocity and it will commence its hearing March 16 at Washington.

The Grain, Feed and Hay Receivers' Association of Cincinnati is still laboring earnestly to secure a reciprocal demurrage charge, in which it merits the hearty support of everyone connected with the trade. The selfish carriers will bring every force at their command to the defense of the extortion, for they know that if they are denied the right to collect it in one state, their patrons in other states will also attack the abuse.

Another effort is being made to secure a uniform classification of freight and a resolution has been introduced in the Senate requiring the Interstate Commerce Commission to prepare and publish on or before October 1, 1896, a classification of freight articles and rules, regulations and conditions of freight transportation which shall be known as the National Freight Classification. With one classification in force everywhere, it will be a comparatively easy matter for a shipper to learn from the freight tariff schedules what it will cost him to send hay or

grain to any out of the way place without consulting the freight agent, who, by the way, is not responsible for any illegal rates he may intentionally or unwittingly grant.

The last government crop report seems to be more satisfactory to the trade than any the department has issued in a long time. Either the department has changed its methods or the trade its opinions. Whatever the change, it is a very acceptable one.

Now that the commercial exchanges of the country have no objection to anti-option legislation, Congress seems to have lost all desire to burden the statute books with such unreasonable laws. The latest bill of this nature has been killed by the subcommittee of the House Committee on Agriculture by a vote of 9 to 6. So it seems settled that no attempt will be made by the present Congress to interfere with the trade in grain.

The public elevator men are still dealing in grain stored in their own houses and the Chicago receivers and dealers are the only ones who have spunk enough to attempt to stop it. At other markets dealers may be entirely at the mercy of the elevator men and they may accept skin grade grain without a murmur, but it seems more likely that the warehousemen are not dealers at other markets. If at all, surely not on the extensive scale that it is conducted by Chicago elevator men.

A Montreal banker has startled the business men of that city by making a statement to the effect that it was customary for merchants who had obtained advances on goods stored in public warehouses to substitute other goods of the same class and value. This substitution is made daily in the public elevators of every grain market and frequently grain of inferior value, although graded the same, is substituted. The elevator man may profit by such substitution, but the dealers may lose.

The Rock Island Railway Co. has won a suit in which the Missouri Board of Railway Commissioners attempted to compel it to switch its cars to another road to be unloaded. The Rock Island switched its cars to an elevator, so that the grain could be transferred to the cars of the other road, but this was not satisfactory to the bumptious commissioners and they courted defeat. A railroad which experiences difficulty in getting back its cars should have the right to keep all its cars on its own track if it so desired.

The Interstate Commerce Commission has been investigating some more charges against rail carriers of discrimination in grain rates. The commission investigates and orders a change in rates. The change is made and probably fair rates will be retained for a few months. Then the old rates or even rates far more inequitable will be put in force and the commission will have to make another investigation. If rail carriers were fined heavily for discriminating or required to rebate the amount of the overcharge to the shipper discriminated against, carriers would be more careful in charging unjust rates.



# EDITORIAL MENTION

The inspection of barley should be improved or abolished.

Cover your wagon scale, lest the wind blow you into bankruptcy.

The grain inspectors at Argentine, Kan., seem to have peacefully settled down to work again.

Dealers who buy grain from renters can avoid the necessity of paying for it a second time by first making certain that the rent is paid.

The shipper who marks his bills of lading "Freight C. O. D." will not have to pay freight twice, nor on grain for which he never received pay.

The country grain shipper who guesses at the weight of his shipments should mend his weighs, else he must expect to run his business at a loss.

There is not a freight traffic manager who will admit his road cuts grain rates or who will not swear that every other road does cut them outrageously.

Some of the railroads have changed the rate on grain so frequently of late that shippers have been kept busy guessing what they could afford to pay for it.

Barley dealers are requested to give us their opinions on the present inspection of barley, which is paid for but never heeded. Let us hear from you.

Any country elevator man, be he of North Dakota or elsewhere, who is so near daft as to guarantee the weights and grades of his shipments is sorely in need of a conservator.

The country elevator man who stores grain free for farmers cannot expect to make a living out of his business. The service costs him something and it is right that he should charge for it.

Chicago's new chief grain inspector has improved the daily reports of inspected receipts and shipments by eliminating the inspected grain transferred from one city elevator to another. A change that should have been made long ago.

We have been informed that in describing the new transfer elevator at Buffalo, on page 291 of the February number, we erred in describing the machinery. We were misinformed. The oat clipper used in the house is a Monitor, made by the Huntley Mfg. Co.

A just judge, an honest Chicago judge, recently became indignant because several young women who had been working in bucket shops were arrested with other employes. This very honorable judge, who held that their arrest was "an outrage against decency and civilization," did not explain why a female could disobey the

law and yet not be amenable to it. The bucket shops must go regardless of the fact that some judges seem to favor their retention.

Weights of unreliable track scales should not be accepted. Rain, snow, ice and hail are persistent causes of disorder in the working parts of track scales.

Those very honorable gentry, the bucket shop men of Chicago, propose to band together and organize a big Produce and Stock Exchange to run the Board of Trade out of business. And a black angel painted his robe white, but the paint soon wore off.

Ontario and Quebec shippers have lately been given considerable trouble by shortages in shipments and have complained, but in vain. Recently one shipment to Montreal was short 300 bushels. Judging from this it is high time shippers were demanding better service.

An effort is being made to induce the farmers of Iowa, Wisconsin and Michigan to raise more and better wheat. This is a work the grain dealers of each state can heartily join in with profit to their business. Farmers of several states have been ignoring wheat to their own disadvantage.

Now that the B. & O. Railroad has been placed in the hands of receivers, shippers can expect to get equitable rates over that route, for the receivers will not be tempted to collect in advance freight on several million bushels of corn in order to pay interest due. Rates will be maintained, or at least not cut secretly.

As carriers are not liable for the errors of their freight agents, shippers now and then are required to pay much more than the rate stated in the bill of lading. This remarkable exaction is not just, as it often changes a profit to a loss and a happy shipper to a sad one, all because an agent misquotes or errs in quoting the rate to the shipper.

Grain shippers along the Northwestern in Iowa are complaining that they cannot get cars to ship their grain. The carrier delays their grain at the initial point, yet makes no offer to pay demurrage for the delay caused. The sense of fairness is not strong in rail carriers and they cannot be expected to grant the reciprocal demurrage charge until forced to do it.

The insurance companies, profiting by past experience, have decided to take charge of the wheat in the ruins of the Van Dusen elevator, which was burned at Minneapolis recently and get all the salvage possible. Heretofore they have sold out for a pittance and the buyer has generally made a big profit on his investment. The salvage on grain is always larger than supposed.

The North Dakota wisecracks who are attempting to compel country elevator men to guarantee that their weights and grading of the grain which they load into the cars for farmers and other shippers will agree with the grading and weighing of Minnesota's officials have no sense of justice or fairness. A just judge would, if such a rank ruling were presented to him, punch it full of holes. The elevator men of North Da-

kota have been knocked around so much by agricultural agitators that they seem to have forgotten they have any rights left. The toleration of such an imposition will serve only to invite others.

Some of the Southern roads have ceased to exert themselves to divert grain shipments to Gulf ports, because the storage capacity at none of them is sufficient to accommodate much business and the delay of cars at destination keeps them idle so long as to make the business unprofitable. When the Gulf ports get more elevators they may confidently expect to get a greater per cent. of the export trade at all times of the year.

The Supreme Court of the United States, in the case of Hanson vs. Boyd, recently decided that trading in grain for future delivery is not gambling. Few products consumed by the inhabitants of this country are not sold for future delivery. Manufacturers, wholesale dealers, jobbers, retailers and even the consumers buy for future delivery. Anyone who brands such trading gambling is looking for an excuse to recover a loss.

It is to be hoped that the Government officials will not permit the United States to be hoodwinked into guaranteeing the bonds of the financiers who claim to desire to dig a ditch across Nicaragua. It is an impractical scheme, and even if the canal were constructed it would be of little real value to the grain trade or any other. If the Government bites on this scheme the Moon Telegraph Co. will immediately apply to have its bonds guaranteed.

The official visible supply reports are still incomplete and misleading and there seems to be no desire upon the part of the compilers to improve them. Many important storage points are not included in the reports and the amount in store at some of these points is several times that in store at some of the unimportant points included. The beginning of the crop year, July 1, would be an excellent time for the compilers to enlarge and improve the reports.

Even the Merchants' Exchange of St. Louis has begun a crusade against the bucket shops. If this reform movement keeps on, the markets on 'Change may reflect more truthfully the opinion of all dealers of the country. Bucket shop bets have no influence on the market, but if the bucket shop patrons can be induced to deal on a regularly organized exchange their opinions will be reflected in the market and they will profit by their own deals. The minute a deal is consummated on 'Change the trade feels it, while it never learns of the bucket shop deals.

The National Transportation Association, from which so much was expected and by which so little has been done, is not dead, but is still striving to advance the interests of the shippers. It will hold a meeting in Chicago March 19 to consider the uniform classification of freight. If all carriers classified freight alike, it would be a comparatively easy matter to determine the cost of transporting freight from a point on one line to a point on another. With a simpler system of



freight tariffs shippers would not be so dependent upon freight agents for rates, and would not so often be called upon to pay twice what the grain was billed at, owing to an error of the agent.

If the grain dealers of the country would organize a national association they would be able to remedy many of the rank abuses which encumber the trade. State and district associations should first be organized, and then delegates sent by these associations to form a national association. It is the only business of importance which is not organized, and naturally suffers greatly from lack of organization.

A St. Paul sheet which is attempting to pose as a newspaper has undertaken the work of Beelzebub, and is not only painting all the elevators of the Northwest black, but also the operators. It evidently has a very cheap reporter with a strong imagination and no sense of honor, sitting in a very dark, isolated room writing all about the way the grain business of the Northwest is said to be conducted and how it should be carried on to suit the grain grower.

According to the report of the Bureau of Statistics the value of breadstuffs exported in February was \$13,017,408, against \$6,844,673 for February, 1895; and during the eight months ending February breadstuffs exported were valued at \$92,588,912, against \$71,279,283 for the same time in 1894-95. Exports of grain in February, compared with those of February, 1895, in bushels, were as follows: Wheat 4,980,233 against 4,600,926, rye 36,693 against 30, oats 502,661 against 31,162, corn 11,278,808 against 2,501,466, barley 320,803 against 42,775; and the exports for the eight months ending with February were, wheat 43,536,515 against 52,887,505, rye 51,124 against 8,840, oats 2,665,211 against 364,267, corn 62,838,808 against 11,567,894, barley 4,003,943 against 1,186,358. In the eight months ending with February there were exported 10,348,371 against 29,485,104 barrels of flour, 26,767,545 against 10,323,516 pounds of oatmeal and 190,209 against 146,371 barrels of cornmeal during the same eight months of 1894-95.

#### KAFFIR CORN WEIGHT.

Secretary Coburn, of the Kansas State Board of Agriculture, is often asked as to the legal weight of a bushel of Kaffir corn. He has looked the matter up somewhat and finds that in the General Statutes of Kansas, 1889, the weight of rice corn, also of sorghum seed, is fixed at fifty-six pounds, but Kaffir corn is not mentioned. As Kaffir corn is so similar, and in fact but another of the same class of sorghums, it would seem that fifty-six pounds of it should be accepted as a bushel without question, yet it is generally bought and sold by the pound or hundred pounds. Country dealers who handle it claim that it weighs much the same as wheat, or fifty-eight to sixty pounds per bushel, but say that farmers insist on fifty pounds as a bushel. Mr. Coburn has conferred with five of the big seed concerns in Kansas and Kansas City, which deal in this class of seeds most largely, and they unanimously say that the custom is to quote them by the pound; but if a bushel basis is insisted upon by a patron they buy or sell fifty pounds as a bushel, and that this is now the universal custom among seed merchants as to all these sorghums, regardless of the statutes.—Kansas Farmer. If all grain was sold by the 100 pounds this nonsense about the legal weight of a measured bushel would not embarrass dealers or incumber the trade.

#### WHEAT CROP STATISTICS.

The effort of the statistical department of the Agricultural Bureau at Washington to secure more satisfactory crop estimates has not silenced all the grumblers. They charge that the latest official estimate of the wheat crop, 467,000,000 bushels, for last year is too small by a big percentage. One principal reason of their dissatisfaction is that the receipts at primary points east of the Rocky Mountains since the beginning of the current crop year have been 20 per cent. greater than those of the corresponding time in the two years preceding.

For the eight months ending with February the aggregate of reported receipts was 146,029,000 bushels, against 119,918,000 for the eight months ending with February, 1895, and 121,632,000 bushels for a year earlier. The fault-finders say the crop of 1893 was officially estimated at 396,000,000 bushels, and turned out to exceed 500,000,000 bushels, while that of last year must have been very much greater than officially estimated, or the reported movement could not have occurred. The wheat of no former crop has been shipped about from one primary wheat market to the other so much as has that of the 1895 crop. Spring wheat received in the Northwestern markets has been shipped to Milwaukee, Chicago and Toledo, and much of the wheat received at Chicago has been shipped to Milwaukee, Toledo, St. Louis, and even to Kansas City. As the wheat was reported as received at each market, much of it was counted twice and thrice, so the total amount reported as received at the primary markets does not represent the amount received from the farmers' hands.

The fault-finders have a very poor case when they attempt to use the reports of receipts at primary markets to prove the government crop report incorrect.

#### AFTER THE BUCKET SHOPS.

On the last day of February the grand jury of the Criminal Court of Cook County, Illinois, returned indictments against 48 alleged "bucket shop" firms, involving 281 individuals. It is understood that these indictments will be prosecuted to the full extent of the law, as the Civic Federation has engaged counsel to assist the state's attorney.

According to the state's attorney these indictments represent every bucket shop now operating in Chicago. A Board of Trade committee composed of John Hill Jr., H. H. Leech, W. H. Chadwick, S. H. Greeley, and D. W. Storms spent three months in collecting the evidence. The presentation of the cases to the jury and the collection of the evidence were made under the direction and with the aid of the Civic Federation.

Following is a list of the firms indicted:

Equitable Produce and Stock Exchange, Incorporated, Omaha Building.  
Cosmopolitan Commission Company, Incorporated, Omaha Building.  
Rialto Commission Company, Rialto Building.  
Comstock, Coates & Co., 215 to 219 Rialto Building.  
Thayer & Co., 14 Rialto Building.  
The Ullman Commission Company, Incorporated, 14 Pacific avenue.  
C. W. Stansell & Co., Incorporated, 14 Traders' Building.  
Central Stock and Grain Exchange, Incorporated, Rookery Building.  
R. C. Gunning, corner La Salle and Quincy streets.  
Western Grain and Stock Exchange, 94 Washington street.  
Owen & Co., 56 South Clark street.  
George Schreiner & Co., 85 Lake street.  
George Schreiner & Co., Masonic Temple.  
Hosmer & Co., 3 Monadnock Building.  
F. C. Long or Clifton Commission Company, 39 Monroe street and Clifton House.  
Hamilton Commission Company and Jeffreys Commission (same concern), 4 Open Board of Trade and 26 Rialto Building.  
Commercial Commission Company, Traders' Building.  
Brunswick Commission Company, 6 and 7 Exchange place.  
William Skakel & Co. (also known as the Open Board of Brokers), 73 Jackson street.  
William Skakel & Co., 170 Madison street.  
William Skakel & Co., 48 Dearborn street.  
William Skakel & Co., 124 Clark street.  
J. J. Jackson & Co., 126 Washington street.

Metropolitan Commission Company, 28 Pacific avenue.  
P. Crittenden & Co., 726, 218 La Salle street.  
J. S. Level & Co., 25 Rialto Building.  
McKinzie, Turner & Co., 420 Western Union Building.  
C. F. Van Winkle & Co., Incorporated, 45, 236 La Salle street.  
C. F. Van Winkle, room 414, 415 Royal Insurance Company Building.  
Douglas & Co., 611, 612 Royal Insurance Building.  
F. J. Wakem & Co., 1205, 215 Dearborn street.  
J. G. Hulse & Co., 453 Rookery Building.  
J. W. Baker & Co., 232 Rialto Building.  
Van Riper & Co., 447 Rialto Building.  
Frederick Wiggins & Co., 135-153 Van Buren street.  
C. C. Mathers & Co., 703 Medina Building.  
Craig & Co., Omaha Building.  
C. C. Viall & Co., 22 Rialto Building.  
C. C. Viall & Co., 6 Pacific avenue.  
American Commission Company, 30 Rialto Building.  
J. A. Simms & Co., 535 Stock Exchange Building.  
Mullar & Co., 506 Gaff Building.  
Lincoln & Co., 144-146 La Salle street.  
R. B. Halligan & Co., Chicago Opera House Building.  
H. F. Thomas & Co., 219 Chamber of Commerce or 123 Chamber of Commerce.  
Stevenson & Co., 188 Dearborn street.  
Metropolitan Commission Company, 28 Pacific avenue.  
Merchants' Mining Exchange, 11 Calhoun place.  
Equity Commission Company, 1 Open Board of Trade.

The indicted men gave bonds in the sum of \$500, and one plead guilty and was fined \$200 and costs.

The penalty for keeping a bucket shop as prescribed by law is a fine of not less than \$200 nor more than \$500. In cases where the charge is a second offense a term of imprisonment not to exceed six months in the county jail is prescribed. In case the defender is a corporation it shall for a second offense forfeit its charter.

Many of those indicted have moved to new quarters or changed the name on the door and the game goes on.

#### Grain Dealers' Associations.

##### THE GRAIN, HAY AND FEED RECEIVERS' ASSOCIATION OF CINCINNATI.

President, Chas. S. Maguire; secretary, Peter Van Leunen; treasurer, H. Lee Early.

##### THE GRAIN RECEIVERS' AND SHIPPERS' ASSOCIATION OF CHICAGO.

President, John Hill Jr.; vice-president, S. H. Greeley; secretary, W. N. Eckhardt; treasurer, Wm. Nash.

##### CAR GRAIN ASSOCIATION OF BUFFALO.

President, Charles Kennedy; vice-president, J. H. Rodebaugh; treasurer, W. V. Downer; secretary, S. W. Yantis.

##### THE GRAIN RECEIVERS' ASSOCIATION OF MINNEAPOLIS.

President, A. M. Woodward; vice-president, W. G. Nicholls; secretary, Wm. B. Mohler; treasurer, H. W. Commons.

##### SOUTHERN ILLINOIS GRAIN BUYERS' ASSOCIATION.

President, W. D. Sparks, Alton; vice-president, J. E. Duffield, Jerseyville; treasurer, W. B. Pierce, Alton; secretary, G. E. Brown, Brighton.

##### ILLINOIS GRAIN DEALERS' ASSOCIATION.

President, John Crocker, Maroa; vice-president, E. R. Ulrich, Jr., Springfield; treasurer, F. M. Pratt, Decatur; secretary, B. S. Tyler, Decatur.

##### CENTRAL IOWA GRAIN DEALERS' ASSOCIATION.

President, Allen Smith, Boone; vice-president, B. A. Lockwood, Des Moines; treasurer, M. McFarlin, Des Moines; secretary, M. T. Russell, Des Moines.

##### GRAIN SHIPPERS' ASSOCIATION OF NORTHWESTERN IOWA.

President, T. M. C. Logan, Onawa; vice-president, E. M. Parsons, Carroll; secretary and treasurer, F. D. Babcock, Ida Grove; assistant secretary, F. G. Butler, Schaller.

##### OHIO GRAIN DEALERS' ASSOCIATION.

President, Daniel McAllister, Columbus; vice-president, J. B. Van Wagener, London; treasurer, Jesse Brundige, Kingston; secretary, Huntington Fitch, Columbus.



## RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since February 15 has been as follows:

February.	NO. 2 <sup>+</sup> L.W. WHT.		NO. 2 S.P. WHT.		NO. 2 CORN.		NO. 2 OATS.		NO. 2 RYE.		NO. 3 <sup>+</sup> BARLEY.		NO. 1 <sup>+</sup> FLAXSEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	63	63	63 1/2	64	28 1/2	28 1/2	19 1/2	20	38 1/2	38 1/2	27	36	91 1/2	91 1/2
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	67 1/2	67 1/2	63 1/2	63 1/2	27 1/2	28	19 1/2	20	38 1/2	38 1/2	27	37	91	91
20	67 1/2	68 1/2	63 1/2	63 1/2	28	28	19 1/2	20	38	38	27	36	91 1/2	91 1/2
21	67 1/2	67 1/2	64	64	28 1/2	28 1/2	19 1/2	20 1/2	38	38	25 1/2	37	91 1/2	91 1/2
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	68 1/2	68 1/2	64 1/2	65	28 1/2	29	20	20 1/2	38 1/2	38 1/2	27	37	90	90
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	70 1/2	70 1/2	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mar.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	67 1/2	67 1/2	63 1/2	63 1/2	28 1/2	28 1/2	19 1/2	20	38	38	25	35	89	89
10	67 1/2	67 1/2	63 1/2	63 1/2	28 1/2	28 1/2	19 1/2	20	38 1/2	38 1/2	25	35	89 1/2	89 1/2
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	67 1/2	67 1/2	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	62	62 1/2	28 1/2	28 1/2	19 1/2	20	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...

\*Holiday. +Free on board, switches and delivered. ‡Free on board or switched. §On track.

For the week ending February 15 Prime Contract Timothy sold at \$3.85@3.90 per cental, Prime Contract Clover Seed at \$7.40@7.60, Hungarian at 60@70 cents, German millet at 65@85 cents, buckwheat at 55@65 cents per 100 pounds.

For the week ending February 21 Prime Contract Timothy sold at \$3.75@3.85 per cental, Prime Contract Clover Seed at \$7.40@7.50, Hungarian at 60@70 cents, German millet at 65@85 cents, buckwheat at 55@65 cents per 100 pounds.

For the week ending February 28 Prime Contract Timothy sold at \$3.65@3.75 per cental, Prime Contract Clover Seed at \$7.35@7.45, Hungarian at 60@80 cents, German millet at 65@85 cents, buckwheat at 55@65 cents per 100 pounds.

For the week ending March 7 Prime Contract Timothy sold at \$3.50@3.60 per cental, Prime Contract Clover Seed at \$7.35@7.45, Hungarian at 60@80 cents, German millet at 65@85 cents, buckwheat at 55@65 cents per 100 pounds.

## WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the 36 weeks ending March 8, for the last three years, according to the Cincinnati Price Current were as follows:

	1895-96.	1894-95.	1893-94.
St. Louis.....	10,350,000	8,476,000	11,322,000
Toledo.....	5,459,000	13,177,000	10,822,000
Detroit.....	1,894,000	3,506,000	7,297,000
Kansas City.....	7,343,000	5,919,000	11,348,000
Cincinnati.....	836,000	834,000	838,000
Winter Wheat.....	25,882,000	31,916,000	41,627,000
Chicago.....	20,360,000	21,784,000	19,161,000
Milwaukee.....	7,946,000	4,949,000	8,874,000
Minneapolis.....	62,506,000	41,448,000	39,568,000
Duluth.....	46,253,000	29,357,000	28,158,000
Spring Wheat.....	137,065,000	97,538,000	95,781,000
Total, 36 weeks.....	162,947,000	129,451,000	137,388,000

## FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the 19 months ending with February, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1895-96.	1894-95.	1895-96.	1894-95.
August.....	1,257,850	1,306,250	538,880	429,373
September.....	1,799,650	281,390	1,159,128	375,713
October.....	1,975,130	801,350	1,026,467	351,833
November.....	1,292,300	426,800	462,422	143,134
December.....	817,450	459,982	452,984	111,931
January.....	493,900	92,950	214,513	70,016
February.....	359,700	85,800	189,892	105,912
March.....	...	75,900	...	61,456
April.....	...	52,250	...	49,545
May.....	...	88,000	...	198,501
June.....	...	86,900	...	37,865
July.....	...	114,950	...	33,379
Total.....	7,905,950	4,342,412	4,044,266	1,970,557

## RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, Ohio, during the four weeks ending February 29, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	118,000	209,700	81,200	136,000
Corn, bushels.....	447,100	409,800	147,100	588,000
Oats, bushels.....	8,800	12,400	1,000	1,600
Barley, bushels.....	...	3,600	...	100
Rye, bushels.....	2,300	5,000	7,400	13,500
Clover Seed, bags.....	12,694	3,734	23,528	16,968
Flour, barrels.....	3,651	5,880	18,431	71,475

## RECEIPTS AND SHIPMENTS AT CINCINNATI.

The receipts and shipments of grain and hay at Cincinnati, Ohio, during the month ending February 29, as compared with the same period of the preceding year, were, according to C. B. Murray, superintendent of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	66,387	95,510	50,240	70,700
Corn, bushels.....	250,209	413,790	59,697	30,152
Oats, bushels.....	225,368	303,276	110,355	113,182
Barley, bushels.....	102,373	61,049	135	...
Rye, bushels.....	31,187	44,873	19,805	11,582
Clover Seed, bags.....	8,071	2,958	7,234	3,248
Timothy Seed, bags.....	4,740	2,158	4,953	2,921
Other grass seeds, bags.....	4,532	1,562	7,544	5,040
Hay, tons.....	4,910	10,492	1,415	6,213
Flour, barrels.....	196,745	120,234	158,470	92,751
Malt, bushels.....	...	...	...	...

## RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco, Cal., during the month ending February 29, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, centals.....	1,056,509	886,115	918,303	753,454
Corn, ".....	13,906	16,563	580	6,911
Oats, ".....	68,030	20,201	1,724	360
Barley, ".....	195,371	77,849	47,135	14,642
Rye, ".....	57,191	5,862	...	...
Flaxseed, bushels.....	57,191	5,862	...	...
Hay, tons.....	10,902	9,787	673	...
Flour, 1/4 barrels.....	137,600	76,158	107,917	58,119

## RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the month ending February 29, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	142,206	38,450	114,500	8,400
Corn, bushels.....	1,845,150	1,291,870	821,000	188,700
Oats, bushels.....	1,293,100	930,500	1,268,550	768,800
Barley, bushels.....	252,200	245,000	239,600	173,500
Rye, bushels.....	19,800	12,600	7,800	4,200
Milk Feed, tons.....	1,653	555	6,497	5,970
Seeds, pounds.....	240,000	90,000	90,000	54,000
Broom Corn, pounds.....	300,000	45,000	155,950	30,000
Hay, tons.....	7,290	1,910	3,030	200
Flour, barrels.....	42,900	29,250	41,100	34,450
Spirits and Liquors, bbls.....	525	1,426	14,612	16,736
Syrup and Glucose, bbls.....	1,250	850	36,787	40,040

## RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the four weeks ending February 29, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	577,351	380,750	159,050	1,950
Corn, bushels.....	124,150	157,300	3,900	3,250
Oats, bushels.....	451,000	536,000	422,000	505,400
Barley, bushels.....	981,065	436,641	445,316	178,800
Rye, bushels.....	90,785	76,395	14,400	42,900
Grass Seed, pounds.....	884,510	359,253	462,080	179,950
Flaxseed, bushels.....	21,665	7,835	12,180	895
Hay, tons.....	4,423	1,112	297	12
Flour, barrels.....	203,750	76,050	337,082	200,707

## RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during February, 1896 and 1895, of seeds, hay and broom corn:

Receipts.	Timothy lbs.	Clover lbs.	Other Grass Seeds, lbs.	Flax-seed, bu.	Broom Corn, lbs.	Hay, tons.
1895.....	2,712,880	287,102	248,000	98,897	295,964	16,926
1896.....	4,712,050	775,040	410,925	524,232	1,738,360	32,086
Shipments						
1895.....	2,802,072	1,802,078	315,380	48,214	323,706	1,924
1896.....	5,680,563	1,434,874	965,833	274,953	735,102	16,136

## RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the four weeks ending February 29, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	5,279,050	2,453,120	1,265,160	416,660
Corn, bushels.....	145,540	154,190	206,790	10,240
Oats, bushels.....	730,480	252,200	569,750	65,430
Barley, bushels.....	118,150	34,150	22,880	19,510
Rye, bushels.....	43,950	6,800	36,520	4,190
Flaxseed, bushels.....	73,400	5,010	88,610	6,020
Hay, tons.....	1,393	2,741	80	126
Flour, barrels.....	10,309	5,709	862,076	567,258

## RECEIPTS AND SHIPMENTS AT DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the month ending February 29, as compared with the same period of the preceding year, were, according to George M. Lane, Secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	110,857	111,031	8,024	84,993
Corn, bushels.....	214,291	202,552	90,238	98,363
Oats, bushels.....	158,071	105,212	7,099	6,830
Barley, bushels.....	192,025	46,491	...	...
Rye, bushels.....	6,577	1,474	...	...
Hay, tons.....	19,469	14,636	13,425	10,480
Flour, barrels.....	...	...	...	...</



## INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector D. W. Andrews, the grain received at Chicago during the month of February, 1896, was graded as follows:

Railroad.	WINTER WHEAT.									
	White.			Hard.			Red.			No G'de.
	2	3	4	1	2	3	1	2	3	
C. B. & Q.	1	1	1	8	3	16	4			
C. R. I. & P.					2	8	3			
Chicago & Alton										
Illinois Central					4		5	1		
Freeport Div., I. C.							3			
Galena Div., C. & N. W.					1					
Wis. Div., C. & N. W.						2	3			
Wabash						1	4	2		
C. & E. I.										
C. M. & St. P.	3	3					2	3		
Wisconsin Central							1			
Chicago & Great West.										
A. T. & S. Fe.					1	2	1			
Through and special				12	1	456	16			
Total each grade	4	4	1	16	21	468	61	31		
Total winter wheat	9									590

Railroad.	SPRING WHEAT.									
	Northern.				No Grade.				White.	
	2	3	4		1	2	3	4	2	3
C. B. & Q.	76	2	509	3					1	
C. R. I. & P.	10	36	99	21						
Chicago & Alton										
Illinois Central										
Freeport Div., I. C.										
Galena Div., C. & N. W.										
Wis. Div., C. & N. W.										
Wabash										
C. & E. I.										
C. M. & St. P.	2	3	360	10						
Wisconsin Central										
Chicago & Great West.										
A. T. & S. Fe.										
Through and special	248	556	100	11						
Total each grade	371	622	1316	80	3	1	9	1	4	
Total spring wheat					2,392	2	9	5		

Railroad.	CORN.									
	Yellow.				White.				No Grade.	
	2	3	4		1	2	3	4	2	3
C. B. & Q.	35	464	2	35	370	510	123	6		
C. R. I. & P.	52	92	2	10	119	255	24			
Chicago & Alton										
Illinois Central										
Freeport Div., I. C.										
Galena Div., C. & N. W.										
Wis. Div., C. & N. W.										
Wabash										
C. & E. I.										
C. M. & St. P.	18	17	15	25	5	73	17			
Wisconsin Central										
Chicago & Great West.										
A. T. & S. Fe.										
Through and special	17	598	8	26	185	751	35	1		
Total each grade	240	2976	41	372	1,041	3,175	488	21		
Total corn									8,354	

Railroad.	OATS AND RYE.									
	OATS.					RYE.				
	White.			W. C. No Grade.		2			No Grade.	
C. B. & Q.	38	464	82	121				56	6	
C. R. I. & P.	69	485	45	192				21	2	
Chicago & Alton										
Illinois Central										
Freeport Div., I. C.										
Galena Div., C. & N. W.										
Wis. Div., C. & N. W.										
Wabash										
C. & E. I.										
C. M. & St. P.	103	792	52	322				9	32	
Wisconsin Central										
Chicago & Great West.										
A. T. & S. Fe.										
Through and special	117	245	60	39				2	10	
Total each grade	605	3,218	539	1,455	3	87	168	21		
Total oats and rye										189

\* White clipped.

Railroad.	BARLEY AND TOTAL GRAIN RECEIPTS.									
	Barley.					Total No. Cars all Grain by Roads.				
	2	3	4	5	No Grade.	2	3	4	5	No Grade.
C. B. & Q.										3,017
C. R. I. & P.										1,632
Chicago & Alton										763
Illinois Central										1,490
Freeport Div., I. C.										603
Galena Div., C. & N. W.										2,246
Wis. Div., C. & N. W.										1,662
Wabash										454
C. & E. I.										328
C. M. & St. P.										3,161
Wisconsin Central										11
Chicago & Great West.										698
A. T. & S. Fe.										317
Through and special										3,562
Total each grade	2	1,280	202	27	14					
Total barley										1,531
Total grain, cars										18,973

## VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, March 7, 1896, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany		70,000	40,000		10,000
Baltimore	124,000	691,000	88,000	96,000	
Boston	381,000	102,000	11,000		
Buffalo	1,618,000	89,000	27,000	300,000	637,000
do afloat	259,000		223,000		250,000
Chicago*	19,832,000	4,386,000	1,235,000	388,000	18,000
do afloat	349,000	5,138,000	832,000		
Cincinnati	11,000	3,000	19,000	16,000	62,000
Detroit	301,000	58,000	10,000	12,000	10,000
Duluth	11,734,000	113,000	953,000	185,000	149,000
do afloat	512,000				
Indianapolis	80,000	58,000			
Kansas City	1,371,000	92,000	35,000	27,000	
Milwaukee	418,000	2,000		226,000	45,000
do afloat	173,000		120,000		
Minneapolis	19,061,000	42,000	552,000	116,000	239,000
Montreal	826,000	27,000	263,000	3,000	53,000
New York	2,878,000	132,000	1,544,000	9,000	89,000
do afloat	228,000		93,000		109,000
Oswego					28,000
Peoria	19,000	228,000	356,000	4,000	
Philadelphia	358,000	514,000	123,000		
St. Louis	1,210,000	1,170,000	528,000	3,000	2,000
do afloat		107,000			
Toledo	722,000	806,000	64,000	125,000	
do afloat					
Toronto	28,000		85,000		26,000
On Canals			12,000		
On Lakes					
On Miss. River		274,000	17,000		
Total	62,596,000	14,050,000	7,228,000	1,490,000	1,747,000
Corresponding date 1895	77,717,000	13,792,000	6,408,000	297,000	1,217,000

\* Including grain in National Elevator, which is not regular under the rules of the Chicago Board of Trade.

## EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending March 7, as compared with same weeks last year, have been as follows:

Articles.	For week ending Mar. 7.		For week ending Feb. 29.	
	1896.	1895.	1896.	1895.
Wheat, bushels	850,000	738,000	708,000	1,213,000
Corn, bushels	2,725,000	688,000	2,593,000	554,000
Oats, bushels	250,000	12,000	200,000	7,000
Rye, bushels	16,000		13,000	
Flour, barrels	359,900	244,000	283,000	270,000

## SCREENINGS.

Late news from Minneapolis seems to confirm the report that the Northwest has wheat to burn.

"How were your crops, Parsnips?" "Well, they didn't turn out as well as I thought they were a-goin' to, and I didn't think they would."

A Bear (sympathetically)—What cha makin'-hic-such a rye face over, ole man—hay? hic!

A Bull—Same reason that makes you have such wheat looks—see?

Pat—Hilloo. Is this the feed store? Will, sind up at once a bale of hay, two quarts of bran and a bushel of oats. Who is it there? Ah, don't git gay. It's there the horse.

Jsmith—Say Bjoncs, I am going to send some of these grain cleaner people to see you pretty soon. Bjoncs—What for, old man? Jsmith—Why, I think a good many of your stories need a smut machine.

"I see they're going to change the name of Wall street," said Mr. Putsankall.

"Is that so?"

"Yes. They're going to call it Wall Street."

"What a crying shame!"

"Ever see anything like it?" said the man who was showing him around.

"Anything like it?" contemptuously answered the Western Populist who found himself for the first time among the high buildings of Dearborn street. "Say, was you ever in a Kansas cornfield?"—Chicago Tribune.

Mrs. Hayseed (on 'Change)—Good lords! I never heard such a racket. How do folks think in all this noise?

Mr. Hayseed—Think! They don't try to think. They just buy and sell like mad for a few hours, and then go home and figure up to see whether they are rich or ruined.

Husband (reading Sunday newspaper)—Mary, here's something new in the household line. I have had your baker's and grocer's home-made bread, pies and chocolate; here is a whole column about home made desolate. (Thinks he is funny.)

Wife—You needn't read it. You can get the receipt at your favorite bucket shop.

During February there were 4,219 cars of grain inspected at Superior, Wis.

## VALUABLE BOOKS FOR GRAIN DEALERS.

The following standard works will be sent, postage paid, on receipt of prices given:

Robinson's Telegraph Cipher.—The publishers have recently revised this excellent work, and we are now prepared to supply the trade. Cloth binding, \$1.50; leather, \$2.00.

Weigh Books.—Containing 125 perforated leaves with four weigh tickets and four stubs to each leaf, well printed upon good paper. The books are well bound. Copies will be mailed to any address for \$1.00.

Clark's Vest-Pocket Grain Tables.—A very useful and handy little book for grain buyers; to be used in reducing to bushels any quantity of grain or seeds up to 100,000 lbs. Size 2½ by 8½ in., 16 pages \$0.50.

Pounds to Bushels.—These tables which show the number of bushels in any quantity from 20,000 to 70,000 pounds were compiled for the Chicago Grain Inspection Department. They are well printed on good paper and conveniently arranged for quickly finding the number of bushels in a carload. Each book contains ten leaves, and each leaf is indexed at margin and printed on one side only. Each book is neatly bound in cloth. They will save clerks much labor and prevent errors in reduction. Price for "Oats," \$1.00; "Barley," \$1.00; "Corn and Rye," \$1.00. The set, \$2.50.

Jennings' Telegraph Cipher and Directory to New England Trade.—A new guide to carload buying of grain throughout New England. A list of those engaged in the grain, feed and flour trade. Western grain shippers and millers wishing to do business in this territory will find this directory invaluable. The telegraph cipher has met with favor and is highly recommended by users. In fact the code part of the book is considered by many shippers superior to any other in use. It is modern and practical, a great money saver, and will prevent mistakes. Nicely bound in leather, \$3.00.

Adams' Cable Codex.—This code is compiled especially for sending cablegrams, and is used extensively in this country and abroad. The seventh edition, which is about to go to press, will contain 160 pages of cipher words, conveniently arranged. The code contains sentences covering and referring to buying and selling, condition of market, sterling money, United States money, business, financial matters, letters of credit, drafts, standing of firms and many sentences used by travelers. The cost of the code is a mere nothing compared with the saving which can be made on one message. Price, postpaid, \$0.55.

Davis' Grain Tables.—These tables give the value of any number of bushels of produce weighing 60 pounds to the bushel from 25 cents to \$1.25 per bushel, and the value of any produce weighing 32, 48 and 56 pounds to the bushel at 15 cents to \$1.50. The book also contains Davis' Dockage Table, which gives the amount to dock any load of wheat up to 600 bushels at 1½ to 5 pounds dockage. The book contains 219 pages of tables, printed on good paper, with large type, and well bound in cloth. The book is a new publication, and the arrangement of the tables is much more convenient than in some of the old publications. Price, \$1.25.

Clark's Grain Tables.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains 16 tables, and is neatly bound in cloth. Price, \$1.50.

Clark's Official Grain Dealers' and Shippers' Gazetteer.—This invaluable book contains official, corrected and revised lists of elevators, flour mills,



# ELEVATOR

## GRAIN NEWS

W. H. Pearce is buying grain at Kappa, Ill.

F. H. Mayer is buying grain at Haverhill, Iowa.

C. A. Hight intends to erect an elevator at Dalton, Ill.

B. M. Fields intends to build an elevator at Lock Haven, Pa.

An elevator and warehouse may be erected at Cortesville, Pa.

It is reported that all the elevators at Pt. William, Ont., are filled.

A corn elevator will be added to the glucose works at Rockford, Ill.

The Bargin Elevator Co. is operating its new plant at Mayfield, Ohio.

The Guthrie Mill Co. has completed its new elevator at Guthrie, Ky.

George Conrad of Artesia, Ill., has bought two elevators at Claytonville.

Greenfield & Cole will build an elevator at Dalton, Ill., at a cost of \$3,000.

Elmer Davis is overseeing the erection of a grain elevator at Cramer, Ill.

Dart & Bonner, grain dealers of Pierpont, S. D., have dissolved partnership.

The Central Elevator Co. has temporarily closed its house at Waverly, S. D.

Palmer & Perry, grain dealers of Spokane, Wash., have dissolved partnership.

It is said that a 150,000-bushel elevator is to be built at Grand Forks, N. D.

J. W. Piper, grain dealer of Greenfield, Ill., has discontinued his business.

Olcott & Co., Limited, grain exporters of New York City, assigned recently.

Jane Evans has bought out W. M. Sweany, dealer in grain, etc., at Barnveld, Wis.

An elevator will be erected at Hopkins Station, Mich., by the Merrill Milling Co.

Husted & Co.'s new elevator at Buffalo, N. Y., is now completed and in operation.

Hyatt's elevator at Wheatland, Ind., was recently robbed of cloverseed valued at \$800.

G. M. Briggs, dealer in grain, hay and feedstuffs at Memphis, Tenn., assigned recently.

It is reported that the F. & P. M. R. R. Co. will erect two elevators at Saginaw, Mich.

Chas. H. White has succeeded T. E. McFarland, dealer in grain, etc., at Sabetha, Iowa.

It is reported that an elevator is to be erected at Sing Sing, N. Y., by Crow & Williams.

Dan T. Danforth & Co. have succeeded Warren & Co., commission merchants of Chicago.

Bradshaw & Cunningham, dealers in grain, etc., at Little Rock, Ark., assigned recently.

It is reported that the Texas & Pacific R. R. Co. will erect an elevator at Westwego, La.

Walters & Sheers, dealers in grain and agricultural implements at Oto, Iowa, have assigned.

Prout Bros., dealers in grain, hay, flour, etc., at Boise, Idaho, have dissolved partnership.

B. F. O'Neal has succeeded Hamilton & O'Neal, dealers in grain, etc., at Great Falls, Mont.

Farmers in the vicinity of Owatonna, Minn., are organizing a company to erect an elevator.

M. A. Wilkinson has succeeded H. W. Snelling & Co., dealers in grain and hay at Norfolk, Va.

The Waldo Elevator Co. has been incorporated at Waldo, Iowa, with a capital stock of \$10,000.

C. Williams, dealer in grain and notions, at Cherokee, Kan., has moved his business to Walnut.

Herbert Lutterton contemplates the erection of a grain storage warehouse at Fayetteville, N. C.

The Great Western Elevator Co. has built corn cribs at Berkley, Iowa, where it is cribbing corn.

Miller & Craig, grain and stock commission merchants of Bellefontaine, Ohio, assigned recently.

W. H. Beach of Holland, Mich., has purchased the W. T. Lamoreaux elevator at Grand Rapids.

J. B. Cover & Co. of Lowell, Mass., dealers in grain and flour, have dissolved partnership, Mr. O. J. Davis retiring. The business will hereafter be con-

ducted by J. B. Cover, under the old firm name of J. B. Cover & Co.

F. J. Farquer, grain commission merchant of Kansas City, Mo., has discontinued his grain business.

The firm of Sudduth, Youle & Co. was recently organized at Quincy, Ill., to deal in grain, feed, etc.

Heidermann & Traschel will rebuild their flax mill at Shakespeare, Ont., which was burned recently.

F. G. Burnham has succeeded W. N. Potter & Co., dealers in flour, grain, hay, etc., at Holyoke, Mass.

It is reported that John Branch of Somersville, Ohio, will erect an elevator at Union Village, Ohio.

John Adger, dealer in grain at San Antonio, Texas, has sold out his business to McCarroll & Pendleton.

A. R. Scott & Co., grain dealers of Bethany, Ill., are said to be buying a great deal of corn this season.

J. Lindbaum has bought an elevator at White-water, Wis., where he will engage in the grain business.

F. G. Logan & Co., commission merchants of Chicago, Ill., have admitted Benj. B. Bryan to partnership.

W. C. Walters, grain dealer of Toledo, Iowa, has erected a large corn crib near his elevator at that place.

Dixon & McIntyre have succeeded Littlefield & Dixon, dealers in grain and flour at Portsmouth, N. H.

Wm. J. Holmes, dealer in grain and hay of New York City, assigned March 10. Liabilities about \$30,000.

A company has been organized at Sandersville, Ga., with a capital of \$25,000, to build a cotton seed oil mill.

The B. A. Larchwood Grain Co. has been incorporated at Des Moines, Iowa, with a capital stock of \$50,000.

J. A. Johnson, dealer in grain, groceries, etc., at Manistee, Mich., failed recently with liabilities of \$22,000.

A company is being organized at Fort Worth, Texas, to erect a cotton seed oil mill of 100 tons' capacity.

The Johns Grain & Produce Co. has been incorporated at Van Wert, Ohio, with a capital stock of \$25,000.

Collins & Fitzgerald, dealers in grain and farm machinery at Campbell, Minn., have succeeded J. H. Fitzgerald.

The Des Moines Roller Mill Co. is contemplating erecting additional storehouse and elevator room this spring.

Smith & Snow have purchased the hay and grain business formerly belonging to A. W. Rice at Westfield, Mass.

J. H. Pope & Co., dealers in grain, farm implements, etc., at Silver Creek, Neb., have dissolved partnership.

The Victoria Elevator at Pembina, N. D., has been closed for the season, all the grain having been shipped out.

Henry Wilson has succeeded Wilson, Rose & Co., dealers in grain and agricultural implements at Starfield, Mo.

A scheme is on foot for the erection of a large elevator next spring at Muskegon, Mich., by the M. G. R. & I. R. R.

The Ripley Flax Co. has been incorporated at Ripley, Ont., with a capital stock of \$10,000 to manufacture flax, etc.

It is reported that there is a movement on foot for the erection of a large elevator and warehouse at Cincinnati, Ohio.

The stockholders of the Farmers' Elevator Co. of Corona, S. D., are contemplating disposing of their warehouse.

Day & Co., grain commission merchants of Chicago, have dissolved partnership, F. H. Day continuing the business.

The Sullivan Grain Co. has succeeded L. C. Fleming, grain dealer at Sullivan, Ill., and will operate the Fleming elevator.

It is stated that Uppendahl Bros. & Co. will build an elevator at Dalton, Ill., in the spring, and engage in the grain business.

J. A. Augspurger, dealer in grain and coal at Carlock, Ill., expects to overhaul and remodel his elevator in the near future.

It is reported that there are over 200,000 bushels of corn stored at Homer, Ill. The two enterprising grain dealers at that place, J. N. Gunder and J. H.

Parish, have cribs which it is said would extend almost a mile if set in one line. They are 10 feet wide and 14 feet high.

The Givanovich Oil Co. of Natchitoches, La., whose plant burned recently, will reestablish a mill of 30 tons' daily capacity.

The Central Stock and Grain Exchange of Chicago has opened an office at Sterling, Ill., which is in charge of Philip Myers.

Nye & Schneider, grain dealers and elevator men, have erected two corn cribs 10x50 feet at Clarkson, Neb., and are handling corn.

Bunden Bros., millers of New Cambria, Mo., are erecting a 20,000-bushel elevator to be operated in connection with their flour mill.

Since last August Hasenwinkle & Cox, grain dealers of Hudson, Ill., purchased 175,000 bushels of corn and 100,000 bushels of oats.

J. D. Covey of Bentonville, Ark., has purchased a one-half interest in the elevator and mill at Gravett, belonging to the Valley Milling Co.

Carrington & Hannah and Perring & Wood, the two grain companies at Gifford, Ill., received 50,000 bushels of corn in one week recently.

Peavey & Co. of Minneapolis have decided to erect an elevator if the next crop will warrant them doing so. The lumber has been purchased.

H. C. France & Co. of Rosehill, Iowa, who have already stored over 12,000 bushels of corn at that place, have erected another large crib.

H. B. Shelledy, dealer in grain and lumber at Fremont, Iowa, is building an addition to his elevator at that place and will put in an engine.

J. M. Cathcart, dealer in grain and lumber at Sidedell, Ill., has sold his lumber yard and will devote himself entirely to his grain business.

The McFarlan Grain Co.'s elevator at Luther, Iowa, was entered by burglars recently, who blew open the safe and secured about \$300.

Farmers in the vicinity of Weaver, Minn., held a meeting recently and organized a company to build and operate an elevator at that place.

The Nordyke & Marmon Co. has received an order for rice mill machinery to replace the Crescent City Rice Mill, which was recently burned.

It is reported that a large elevator is to be erected at Alton, Ill., by the Burlington and Big Four Railroads, which will act as feeders for it.

J. B. Seymour has leased the Hepburn elevator at Kenton, Ohio, belonging to the M. E. Burke Milling Co., and which was in the hands of a receiver.

L. Freeman, formerly of Chicago, has opened an office at Dubuque, Iowa, where he has engaged in the grain, stock and provision commission business.

Emery Mill is building a 30,000-bushel elevator at Sidney, Ohio. It will have a complete outfit of machinery, which will be furnished by Phillip Smith.

The Jeffersonville Coal & Elevator Co. has been incorporated at Jeffersonville, Ind., with a capital stock of \$10,000, by C. L. and H. E. Jewett and another.

The Crowell Lumber and Grain Co. has erected additional corn cribs at Clarkson, Neb., where an extraordinary amount of corn is being stored this season.

H. Gund of Lincoln, Neb., will build an elevator at Lamoni, Iowa. He has bought a No. 2 Cornwall Cleaner and other machinery of the Barnard & Leas Mfg. Co.

Mrs. M. E. Culver of Culver, Ind., writes us that her elevators on the Big Four road are undergoing repairs in the expectation of a rush of business in the spring.

The Central Elevator Co. has used five carloads of lumber for the construction of corn cribs at Berkley, Iowa, where there is now about 100,000 bushels of corn cribbed.

The Flint & Père Marquette R. R. Co. is reported to be planning to considerably improve its elevator at Ludington, Mich., and put in steam shovels the coming season.

Murphy & Stubblefield, grain buyers of Stanford, Ill., have dissolved partnership. C. F. Stubblefield will retire and the business will be continued by F. M. Murphy.

A movement is on foot among the farmers in the vicinity of Northfield, Minn., for the organization of a company to erect an elevator and go into the grain business.

Mary Brock & Co.'s hay and feed store at Hoboken, N. J., was entered by burglars recently, who broke open the safe and took \$40. They were afterward arrested.

Insler Bros. are completing their new elevator at Hersher, Ill. It is 24x40 feet, has two dumps, and will have a capacity of 18,000 bushels. A gasoline engine will furnish power. The elevator will have



a complete equipment of necessary machinery. Besides doing a grain business Inster Bros. will grind feed, for which purpose a feed mill will be added.

At a recent meeting of the Farmers' Grain Co. of Estelline, S. D., a report was presented showing that the profits of the six months ending February 29 had been \$500.

The grain and produce store of E. T. Paine Jr., at Tampa, Fla., was recently robbed of a sum of money by a negro employee. The thief has not been apprehended.

John Trainor of Middlefield and Jarvis Smith of Winthrop, Iowa, have purchased O. J. Metcalf's elevator at Independence, where they have engaged in the grain business.

The Grangers' Elevator Co. has been incorporated at Manito, Ill., with a capital stock of \$3,000. Incorporators: Carlos S. Hardy, John F. Henderson and Hamilton Moses.

It is reported that S. P. Stewart & Son of Bowling Green, Ohio, have been awarded the contract to erect a steel elevator on a new plan at Brooklyn, N. Y., to cost \$350,000.

K. Dykema & Son have embarked in the grain and feed business at Grand Rapids, Mich. They have erected a feed mill and will carry on a wholesale and retail business.

C. D. Colby has succeeded Colby & Brown, dealers in hay, grain, flour, feed, etc., at Perry, Mich. Mr. Colby is proprietor of the Perry Elevator, situated on the Grand Trunk R. R.

The firm of H. M. Greene & Co., commission merchants of Chicago, was incorporated recently with a capital of \$10,000, by R. L. Condon, F. D. Strawbridge and Edward Atfield.

Robert Lindblom, commission merchant of the Chicago Board of Trade, has established in his office a long distance telephone to New York, and will do a cotton and stock business.

The B. A. Lockwood Grain Co. has been incorporated at Des Moines, Iowa, with an authorized capital stock of \$60,000. The incorporators are: B. A. Lockwood and Lamoine Molt.

George Peck & Sons, grain dealers and elevator men of Monticello, Ill., have put in an equipment of milling machinery and are manufacturing flour, corn goods, brewer's grits, etc.

The wheat inspected at Winnipeg, Man., during the five weeks ending February 22 amounted to 1,239 cars, against 199 cars inspected during the same time of the previous year.

Lowry & Steller, grain commission merchants of San Francisco, Cal., have dissolved partnership, and W. G. Lowry will continue the business under the firm name of W. G. Lowry & Co.

Chalmers Bros. & Bethune, grain dealers, have commenced the erection of a 30,000-bushel elevator at La Riviere, Man. The structure will be similar to the firm's elevator at Clearwater.

J. P. Wright, grain buyer at Arthur, Ill., for Bartlett, Kuhn & Co. of Terre Haute has bought for his firm since July 15, 1891, 886,594 bushels of grain, for which he has paid over \$300,000.

Senier & Co., millers at Hamilton, Ohio, have rebuilt their grain elevator which was burned recently. Its capacity is 100,000 bushels. The Nordyke & Marnon Co. furnished the machinery.

The Farmers' Elevator Co. of Alpena, S. D., recently paid off a mortgage of \$1,000, accepting an offer of a loan from S. D. Woodward & Co., grain commission merchants of Minneapolis.

The Iowa Land & Grain Co., which has offices at St. Paul, Minn., and Kansas City, Mo., is reported to be about to erect corn cribs and other buildings at Ira, Iowa, and go into the grain business.

Fowler & Calhoun, manufacturers of corn meal and dealers in grain, feed, etc., at St. John, N. B., write us that they contemplate putting up a 300,000-bushel elevator at that place, with marine legs.

O. W. Mills of Bay City, Mich., whose elevator at Freeland was destroyed by fire a short time ago, has rented H. D. Howe's warehouse, where he will continue to buy grain until his elevator is rebuilt.

The Simpson & Robinson Co. of Chicago has completed a transfer elevator at Kensington, Ill., for the Michigan Central R. R., and it is now running. It has a transfer capacity of 10 cars per hour.

J. A. Fitch has sold out his interest in the general merchandise business of Fitch & Drake, Manchester, Conn., and has taken an interest in the Manchester Grain Elevator Co., of which he will be manager.

The Rockwell Cooperative Society, the largest farmers' society in the state, closed its seventh annual business session at Mason City, Iowa, March 7. During the year they handled 378,000 bushels of oats, 35,000 bushels of corn, 18,000 bushels of flax,

and 1,500 tons of timothy, an aggregate volume of business of \$233,331.65. The Rockwell Society has a membership of 491. N. Densmore was elected president for the eighth time.

The Consolidated Produce & Stock Exchange of Chicago has been incorporated. The officers named are the same as those of the Equitable Grain & Stock Exchange, one of the concerns recently indicted by the grand jury as a bucket shop.

Farmers and business men are preparing to erect a flat grain warehouse on the Great Northern road at Hewitt, Minn., and will buy grain. They have organized a company and elected William Nobes of Oak Valley president, and John Hayton treasurer.

The new Burlington elevator at St. Louis, Mo., which has a capacity of 1,400,000 bushels, has been made regular, making the total public elevator capacity of St. Louis 13,950,000 bushels. The Burlington is now complete in every detail, and it is expected that it will do a large business.

C. L. Pensyl of Leesburg, Ohio, writes us that Dewey Bros., who recently purchased L. Pensyl's flour mill, intend to engage in the grain business, and to that end are erecting a 20,000-bushel elevator. Contract has been let to the Barnard & Leas Mfg. Co. for a complete equipment of machinery.

At a meeting held February 19 the Brooklyn Wharf & Warehouse Co. declared its first annual dividend of 6 per cent. on the \$2,500,000 of the company's preferred stock "A," payable March 2. This was somewhat beyond expectations, on account of the small stocks of grain at New York this winter.

The Kendrick Grain Co. of Kendrick, Idaho, has completed and is now using chutes to convey grain from high land to its warehouses below. One runs to a height of 90, and the other 192 feet, and they both save a great deal of time and money by avoiding the hauling of grain long distances to the warehouses.

The Mahler-Wolf Produce Co. has succeeded the firm of B. Mahler & Co. in the produce and commission business at Cleveland, Ohio. The officers of the concern are: President, B. Mahler; vice-president and manager, L. M. Wolf; secretary and treasurer, E. S. Weil. They have a paid up capital of \$50,000.

The Boston Stock and Grain Co. has opened an office at Brockton, Mass., and claims to be "incorporated under the laws of Massachusetts with a capital stock of \$100,000, fully paid in." The company invites "inspection as to its financial standing." Bucket shop patrons always investigate the shop after it is closed.

The Hayfield Farmers' Elevator and Mercantile Co. has been organized at Hayfield, Minn., and incorporated with Hon. Fremont J. Thoe, president; John Wicker, vice-president; James M. Amundson, secretary, and John Kording, treasurer. The company will either build or buy an elevator and go into the grain business.

The construction of the new elevator at Mobile, Ala., is well under way. It will be 58 feet wide, 117 feet long, and 150 feet high. Its storage capacity will be 250,000 bushels, and there will be a chute 600 feet long by means of which 10,000 bushels of grain per hour can be loaded into vessels. E. Lee Heidenreich is in charge of the work.

The F. A. & I. U. Elevator Co. of Pembina, N. D., held its annual meeting recently, when it was reported that there was a cash surplus of \$571 and 600 bushels of wheat. But there was trouble, just the same. The shareholders, of whom J. M. Chisholm, J. T. Blacklock, W. F. Grill, Robt. Anderson and P. H. McMillan have a controlling interest, recently rented the elevator to J. T. Blacklock for a term of six months. The directors refused to surrender the house until their term of office expired, and the lessee thereupon took forcible possession.

The Cutler Co. of North Wilbraham, Mass., reports the following recent sales of its steam dryers: Two No. 3 dryers to Firminich Mfg. Co., Marshalltown, Iowa; five No. 3 to the Duluth Imperial Mill Co., Duluth, Minn.; one No. 3 to the Minkota Milling Co., West Superior, Wis.; one No. 3 to the Hudnut Co., Terre Haute, Ind.; six No. 3 and one No. 2 to the Hudnut Co. at St. Joseph, Mo.; four No. 1 to the American Cereal Co., Akron, Ohio. The Cutler Co. writes us that these dryers for the Northwest are for drying the bran of smutty wheat that has been washed.

C. O. Bartlett of Cleveland, Ohio, reports the following partial list of recent sales: Triumph Corn and Cob Crushers to A. P. Fulton, Liberty Falls, N. Y.; W. A. Hawes, South Newbury, Ohio; E. H. Vanderslice, Perrysville, Ohio; Wm. H. Salmon, Pleasant Grove, Pa.; L. N. Grosvenor, East Claridon, Ohio; J. H. Keim, Canal Fulton, Ohio; M. R. Parks, Burgettstown, Pa.; Andrew Ruff, Troy, N. Y.; John Fusmer, McKinley, N. Y.; John Sinner, Hallsville, N. Y.; four to Paddock, Hodge & Co., Toledo, Ohio. Triumph Corn Shellers to H. H. Porter, Newton Falls, Ohio; Isaac P. Roberts, Eaton Rapids, Mich.; Coleman & Marquis, Oakford, Ind. Vertical

French Burr Mills to L. N. Grosvenor, East Claridon, Ohio; J. H. Keim, Canal Fulton, Ohio; J. W. Dawson, Bedford, Ohio; E. D. Fenkel, Andover, Ohio.

According to a local paper Goodwin & Lindell of Jefferson, Iowa, have opened a bucket shop at Perry, Iowa, and "they have had experience in this line, and thoroughly understand the work!" The country is the place where bucket shops can thrive.

Dan Talmage's Sons of New York City, one of the best known and largest houses in the rice trade, made an assignment March 6 to J. Gilla with preferences of \$14,459, there being about 70 creditors. The assignment is said to be due largely to the low price of rice and the inability of the firm to secure ready money. The firm consists of John F. and Dan Talmage, and has branches at Savannah, Charleston and New Orleans. It did a large commission business besides operating rice mills, and at times held quantities of rice to be sold for account of the Japanese government.

Farmers of the vicinity of Byron, Minn., have organized a stock company under the name of the Farmers' Mercantile and Elevator Co., and intend to go into the grain business. The following officers have been elected: President, R. D. Maxfield; secretary, J. B. Kindell; treasurer, A. L. Cutting. H. H. Carr of Chicago, whose methods of "teaching the farmers" (and incidentally building a nice little elevator for them and allowing them to consign their grain to him) are well known to readers of this journal, was present to explain the details of management of cooperative companies.

A grain dealer of Hancock, Iowa, makes this comment on corn cribbing in Iowa: "The competition between regular dealers and outside cribbers of ear corn has forced us to pay more for corn than was justified on a shipping basis. Consequently about all the corn marketed so far is in cribs. Cribbing was almost an epidemic. Farmers mortgaged their farms to crib corn, some of them paying 18 to 20 cents. What little shelled corn has been offered we have worked to Peoria and Baltimore. Fully one-half of the corn to be moved out of this country is in the hands of speculators, and the other half in the hands of farmers who can afford to hold it for some time."

## PERSONAL

Edward A. Miller of Frederick, Md., has been appointed grain weigher for the city of Baltimore.

William Hinds has accepted charge of the elevator at Hepburn, Ohio, recently leased by J. B. Seymour of Kenton.

Albert J. Wheeler, owner of the Ontario Elevator at Buffalo, N. Y., has been elected president of the Western Savings Bank of that city.

Geo. K. Walton, formerly cashier for the Hereley Bros. Commission Co. of Chicago, has accepted a position with the American Cereal Co.

Conway W. Ball, who has served the Buffalo Merchants' Exchange as Chief Grain Inspector for many years, has been reappointed to that position.

Charles McDonald has been reappointed Chief Grain Inspector of the Baltimore Corn and Flour Exchange, a position he has held for some years.

The engagement is announced of Alvin H. Poehler, who is associated with his father, Henry Poehler, in the grain business at Minneapolis, and Miss Cole, also of Minneapolis.

L. E. Holdridge, of the grain commission firm of Talpey Bros. & Co., Kansas City, Mo., was recently elected a member of the directory of the Kansas City Board of Trade.

The friends of Capt. John O. Foering will be pleased to learn of his re-election as Chief Grain Inspector. It is the twentieth time the Captain has been elected to the office in which he has served so well.

Edwin Partridge of Chicago, one of the largest grain traders in the world, has been seriously ill during the past month, and it is feared he will not live. He began operating in grain about twelve years ago, and for the past six years has carried on immense transactions.

The Illinois Millers' Association has petitioned the Railroad and Warehouse Commission to again take up the consideration of their charges of discrimination against the roads handling flour from the twin cities. The commission has fixed upon April 9 for the hearing, which will be in Chicago.

The Canadian Parliament is considering the question of doing away with the Grain Standards Board and may fix the standards permanently. Permanency is one of the impossibilities of grain grades, and it is to be hoped that the machinery of legislation will not have to be moved every time a change becomes necessary.



# CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

**KANSAS.** Ottawa, Franklin Co., March 11.—The present outlook for the growing wheat crop is flattering. J. H. DUKEHART.

**POTATOES.**—The Department of Agriculture gives the acreage of potatoes in the United States in 1895 as 2,954,952 acres; the total yield was 297,237,370 bushels, against 170,787,338 bushels in 1894.

**ILLINOIS.** Morrisonville, Christian Co., March 9.—The growing wheat crop never looked better than it does now, and there is plenty of moisture in the ground, wheat has been coming in more of late, since prices have been better. R. E. WARDHAUGH.

**INDIANA.** Lebanon, March 3.—During the last week a large per cent. of the acreage of growing wheat in this vicinity has been ruined. The ground freezes at night, and when it thaws out the following day the wheat is bulged from the ground and killed.

**MISSOURI.** Jefferson City, March 6.—The wheat crop of this, Cole County, is in bad condition. There will not be over a half crop, and much of the ground will be plowed up and sowed in oats. This same condition prevails in the surrounding counties. It is caused by the drouth last fall, and rain in December, with hard freeze afterward.

**CALIFORNIA.**—The acreage of wheat and barley sown in the counties of California on the line of the Southern Pacific company, as based on figures of assessors and agents, is given at 3,678,253 acres on Jan. 1, 1896, an increase of 5,777 acres over 1895. These figures represent 36 counties—the real grain-growing counties of the state. Butte County shows an increase over last season of 33,245 acres.

**KENTUCKY.** Lawrenceburg, February 29.—Farmers in this section are very much discouraged over the poor prospects for their wheat. The long dry spell following the planting of this cereal was the first setback, then several freezes without a protection of snow did worse damage, and the recent cold spell about completed the disaster. The chances for a quarter crop are exceedingly slim.

**INDIANA.** Culver, Tippecanoe Co., March 10.—The growing wheat in this vicinity is in fine condition. The last year's crop of corn is nearly all in farmers' cribs yet, on account of the low prices and poor roads. Business of all kinds is at a standstill, but to many it means much needed rest. We are not going to be discouraged, but will go right on putting in our oats and clover. MRS. M. E. CULVER.

**KANSAS.** Topeka, March 6.—Winter wheat in Central and Eastern Kansas was never in better condition at this season of the year than at present. The ground has been thoroughly moistened, and the plant is growing splendidly. The only danger feared by the farmers is severe cold weather may come and kill the growing grain, which is now tender. The acreage is much less than usual, estimated at about two-thirds that of last year.

**INDIANA.** Indianapolis, March 6.—Crop reports from the different parts of Indiana have begun coming into the Weather Bureau. Only a few have been received, and they indicate a sickly condition for wheat in the center and southern sections of the state. Wheat seems to have wintered much better in the north. The extent of damage cannot be estimated yet, but experienced observers say the wheat crop in Indiana will be short from present indications.

**OHIO.** Cincinnati, March 6.—The last week has been unfavorable to winter wheat in this state on account of the freezing weather. In West Central Ohio it is estimated at from one-fourth to one-half crop. In Southeastern Ohio the stand is poor, and the crop badly frozen. In Central Ohio the crop is from 25 to 50 per cent. below the average, and what there is of it is not good. In Eastern Ohio the cold weather did serious damage to the crop, which is now in poor condition. If there is to be anything like a fair crop from Ohio fine weather is needed, and soon.

**GOVERNMENT CROP REPORT.**—The Agricultural Department March 10 issued the following crop report: Returns from the township, county and state correspondents of the department indicate as the amount of corn yet held by farmers 49.8 per cent. of the total crop, or 1,072,000,000 bushels. Proportion and total farm reserves are both unprecedented. A year ago the stock so held was but 457,000,000 bushels. The amount to be sold outside the country is estimated at 21.9 per cent.; last year's percentage having been 13.4. The merchantable proportion is 88.1 per cent., against 82.4 per cent. last year. Average value of merchantable corn, 25.6 cents, and of unmerchantable 15.4 cents. The wheat reserves in farmers' hands amount to 26.3 per cent. of the crop, or 123,000,000 bushels. Of this amount 4.9 per cent. is reported as coming over from 1894

or before. The proportion of wheat sold beyond county lines is 58.5 per cent.

**ILLINOIS.** Springfield, March 6.—Farmers in this vicinity report the condition and prospects of winter wheat to be unusually good, but the acreage is much smaller than usual, because farmers feared an invasion of chinch bugs this year, and did not care to feed them on wheat until the corn came along. Judging from the amount of wheat shipped in here to the mills, and the contracts made, the reserve supply of wheat in this part of the state is much smaller than usual.

**WHEAT** in farmers' hands.—The Orange Judd Farmer is out with the statement giving the supply of wheat in farmers' hands on March 1. It puts the amount at 135,000,000 bushels, against 154,000,000 as its estimate a year ago. Naturally it claims—as do all the other statisticians—that its last year's report was correct, though it will be remembered the government reported only 75,000,000 bushels. Strange freaks are these statistics and statisticians. The five estimates so far made run from 97,000,000 to 157,000,000—surely a sufficiently wide variance for all. But it illustrates the need of a vast improvement in developing them.

**OHIO.**—Columbus, March 6.—Advices to agricultural headquarters concerning the present condition of winter wheat are to the effect that the stand is an excellent one, and from present prospects the crop will be fully up to the average in this state. The only thing yet to be feared is the alternate freezing and thawing of the present month. That if in too much evidence is likely to throw the roots out of the ground and kill them. The winter so far has been especially favorable to the growth of the plant, the temperate weather allowing it to take good root, and agriculturists agree, except in a few isolated places, the outlook is more than favorable. The monthly crop bulletin about to be issued by the State Agricultural Department will substantially set forth this condition. Last fall the dry weather injured the prospects in a measure, but the seasonable rains and high temperature have made green hundreds of acres of winter wheat that was supposed to be killed.

**KANSAS.**—G. W. Watson of Larned, Kan., who travels over a large part of Southern Kansas for the Arkansas Valley Land and Irrigation Co., March 6 wrote to F. D. Coburn, secretary of the State Board of Agriculture, as follows: Taking it as far west as the west line of Hodgeman County—I think the wheat acreage has increased at least from 10 to 15 per cent. this year. The condition of wheat up to the present time, as compared with the last three years, is much better than either of said years. Wheat has been growing and making root nearly all the winter, and has, as a general thing, pushed through the ground, and some fields were beginning to show green some distance last week. The warm weather in February hatched out a large crop of grasshoppers and other insects, but I am pleased to report that they are now covered up with a nice sleet and ice, with about three inches of snow lying level all over the ground, on top of them. Consequently that crop of hoppers is harvested for this year. It commenced raining and sleeting Monday, and the snow fell Monday night. Taking all things into consideration I consider the crop prospects the best at this time of year that I have ever seen since I came to Western Kansas.

**MICHIGAN.**—The Michigan monthly crop report for March reports upon crop conditions as follows: The weather during February was favorable for wheat, the snow being in sufficient quantity throughout the month to afford the plant fair protection. In answer to the question, "Has wheat during February suffered injury from any cause?" 131 correspondents in the southern counties answer "Yes," and 368 "No;" 64 in the central counties answer "Yes," and 116 "No," and 9 in the northern counties answer "Yes," and 89 "No." The average depth of snow on the 15th of the month was more than four inches in the southern and central counties, and more than ten inches in the northern counties. Near the close of the month a thaw occurred and reduced the snow to little more than a trace in the former two sections, and from that date to the present the ground has been bare. In the northern counties the average depth at the end of the month was nearly five inches. At twenty-four elevators and mills from which reports have been received there was no wheat marketed during the month. The total number of bushels of wheat reported marketed in the seven months, August to February, 6,707,118, which is 1,290,500 bushels less than reported marketed in the same months last year.

March 1 completes the first six months of the present crop year as computed at Duluth, and during that time Duluth received of wheat 41,882,000 bushels, against 23,000,000 bushels for same time on preceding crop. If the same proportion is kept up, and the supposition is that it will be exceeded, receipts for the balance of the crop year will be between 14,000,000 and 15,000,000 or a total of about 56,000,000 bushels.

## Late Patents

Issued on February 11, 1896.

Malt Drier.—Louis A. Henze, Detroit, Mich. No. 554,509. Serial No. 562,484. Filed Sept. 14, 1895.

Issued on February 18, 1896.

Baling Press.—Halvor O. Hem, Kansas City, Kan. No. 554,689. Serial No. 556,682. Filed July 22, 1895.

Issued on February 25, 1896.

Dry Kiln.—Albert T. Bemis, Indianapolis, Ind. No. 555,067. Serial No. 570,913. Filed Dec. 3, 1895.

Door for Automatic Weighing Machine. Wm. E. Nickerson, Cambridge, Mass. No. 555,179. Serial No. 550,554. Filed May 24, 1895.

Eccentric Outlet Valve Motion for Gas and Petroleum Engines.—Willy Seck, Oberursel, Germany. No. 555,342. Serial No. 555,223. Filed July 8, 1895.

Gas Engine.—Chas. W. Agerell and Adolph A. Williams, Duluth, Minn. No. 555,355. Serial No. 552,311. Filed June 10, 1895.

Petroleum Motor.—Fritz Henriod-Schweizer, Hauteville, Switzerland. No. 555,373. Serial No. 557,048. Filed July 24, 1895.

Automatic Weighing Machine.—Wm. R. Nickerson, Cambridge, Mass. No. 555,393. Serial No. 547,524. Filed April 29, 1895.

Issued on March 3, 1896.

Grain and Seed Separator.—John Lucas, Hastings, Minn. No. 555,577. Serial No. 365,131. Filed Sept. 16, 1890.

Gas Engine.—Christian J. Weinman and Edward E. Euchenhofer, Dayton, Ohio. No. 555,717. Serial No. 496,456. Filed Jan. 11, 1894.

Gas Engine.—Christian J. Weinman and Edward E. Euchenhofer, Dayton, Ohio. No. 555,791. Serial No. 548,499. Filed May 8, 1895.

Gas or Oil Motor Engine.—Francis W. Crossley, Manchester, and James Atkinson, Amherst, Fallowfield, England. No. 555,898. Serial No. 520,944. Filed Aug. 21, 1894. Patented in England Sept. 8, 1893, No. 10,900, and in France Feb. 5, 1894, No. 236,061.

## REFUSED TO ACCEPT CORN BOUGHT.

The case of Fox vs. Barron was tried before Judge Horne at Detroit, Mich., February 20. This is a case where the plaintiff sought to recover the price of some corn which was sold to the defendant, but which was never claimed. Fox and four other farmers, who reside in Colchester, sold about 1,300 bushels of corn to the firm of Barron & Gott early last June, to be delivered in ten days, the contract price being 57 cents a bushel. Before the expiration of the time corn had fallen in the market and they were asked to hold it a short time. The plaintiff claims that they held the corn until October, when the purchasers were notified that it must be removed within a certain time. This was not done and the corn was sold in Kingsville at a loss of 20 cents per bushel. The action was brought to recover the difference between the two prices, as the plaintiff claims that the corn could have been disposed of to another purchaser at the same figure that the defendant offered for it. His honor gave judgment for \$200, and in doing so held there was a contract with the plaintiffs.

## A BIG CONTRACT FOR CLEANERS

A contract was lately closed for grain cleaners that is worthy of more than ordinary mention. The Globe Elevator Co. of Duluth, Minn., recently placed an order with Huntley Manufacturing Co. of Silver Creek, N. Y., for ten of their No. 9 Monitor Dustless Warehouse Separators. This is certainly an order for any firm to be proud of, and adds another to the many victories scored for the well-known "Monitor." Some months ago the Globe Elevator Co. made room for two Monitors, in order to give the machines a thorough test, under all conditions, before making a change, and how well this test satisfied them is best exemplified by the order they have placed for ten more. Mr. A. F. Shuler, Northwestern agent of the company, negotiated the sale.

The Globe company not long since placed two large Monitor Smutters, also manufactured by Huntley Manufacturing Co. The Huntley Manufacturing Co. have made a world-wide reputation for their grain-cleaning machines. The firm is thoroughly imbued with the spirit of the age, and are never satisfied unless they are advancing. They claim that during the last six years all of the leading cleaning elevators built in the United States, with but two exceptions, adopted the Monitor machines. Certainly this is a flattering record for their machines.



## WATERWAYS

The Erie Canal boatmen have organized an association at Buffalo.

The old Grain Shovelers' Union of Buffalo is being reorganized for next season.

Navigation on the Illinois River between Peoria and St. Louis began March 4, earlier than for a number of years.

Two steamers having an aggregate tonnage of 3,800 tons are to be added to the Lake Michigan line between Milwaukee, Wis., and Ludington, Mich., to carry grain, flour, etc.

The first important work on the improvement of the New York canals under the appropriation will be the dredging of a portion of the Oswego harbor, which work will probably be under way by the 1st of April.

The City Council of New Orleans, La., has passed an ordinance appropriating \$450,000 to buy the lease of the wharfage of that city. It was considered that leasing the wharfage was an obstruction to commercial development.

According to the New York Herald, the Baltic Canal, which has only recently been opened, has already proved a failure, and its traffic is going from bad to worse. Since January 1 only 75 ships have passed through the canal, as compared with 345 in the month of December.

Captain De Puy of Canal Protector is going around with a chip on his shoulder. He says: "I will wager a good canal boat against \$1,000 that the New York Central grain elevators at Buffalo clear one cent a bushel over the cost of labor and fuel for elevating grain."

A bill has been introduced in the New York assembly providing for the appropriation of \$500,000 for immediate use for "extraordinary repairs and improvements of existing mechanical and other constructions connected with the canals." This appropriation covers the repair fund, which usually amounts to \$750,000.

Surveys were recently made of three routes for the proposed ship canal from the Ohio River to Lake Erie. All the routes were declared feasible; but the board concludes that, while it would be feasible to construct a canal, it would, by reason of inadequate depth in the canal and the Ohio, be restricted in its benefits, and its construction would be inadvisable.

Canal Protector is a new paper published bi-weekly at 19 South Street, New York City. Canal Protector has a mission and is out for reform, in italics and small caps, which is nothing else but the advocacy of state elevators. However, it is edited by a man who has had long experience in canal matters, Capt. M. De Puy, who understands the ins and outs of the business.

The delegation of Chicago men which went to Washington to ask an appropriation of \$700,000 for the purpose of dredging the Chicago River recently went before the House Committee on River and Harbor Improvements, where it was set forth that the river must have a depth of 20 feet for the accommodation of the larger vessels now employed in carrying grain, etc.

The prominence New Orleans has gained recently as an exporting port for grain has drawn out some interesting statistics. In 1894 New Orleans exported nearly 7,000,000 bushels of wheat, being exceeded on the Atlantic side only by New York and Baltimore. Ten years before New Orleans exported only 648,337 bushels of wheat, and was surpassed by Boston and Philadelphia as well as by New York and Baltimore.

Last season the shipments of Manitoba wheat from Port William to Buffalo and New York for export amounted to 4,500,000 bushels, while the quantity of Manitoba wheat going via Montreal for export was about 100,000 bushels. This has stirred up a spirit of investigation, and some are agitating the deepening of the canals. Certainly when the grain trade of a city has fallen off 19,100,000 bushels, which the Board of Trade report shows that of Montreal has done, there is something radically wrong.

Some of the members of the New York Produce Exchange are trying to devise a plan to remedy the decline of grain traffic on the Erie Canal. They are said to be contemplating building a fleet of independent canal boats, so as to be able to guarantee storage charges of not more than a quarter of a cent a bushel, so that when the cost of transferring the grain from the canal boat to ocean steamships is added, the total terminal charges will not be more than 1½ cents. They accuse the present canal boat owners of being under the influence of railroads, hence the present charge of \$10 per day on grain which is not taken off the boats within three days after its arrival. The various terminal charges incident to unloading and placing the grain aboard

ocean steamships now amount to about 2¼ cents a bushel. The railroads in order to divert grain from the canal allow it to be stored in the cars upon their arrival at New York at a quarter of a cent a bushel a day.

The Committee on Railways and Canals of the House of Representatives at Washington recently ordered a favorable report on the bill directing the Secretary of War to cause to be made accurate surveys, examinations and final estimates of cost of construction of a ship canal by the most practicable route wholly within the territory of the United States from the great lakes to navigable waters of the Hudson River, of sufficient capacity to transport the tonnage of the lakes to the sea. An appropriation sufficient to enable the survey to be made is authorized.

In a recent article on the Nicaragua Canal scheme in the Forum review, Joseph Nimmo Jr., says: The success of a chimera oftentimes depends upon the adroit use of some alluring phrase. Recourse has been had to such an expedient in the advocacy of the Nicaragua project. It has been proclaimed from one end of this land to the other that the Nicaragua Canal would form an avenue for "the commerce of the globe," just as the Suez Canal is assumed to be an avenue for "the commerce of the globe." This is transparent nonsense. The tonnage of merchandise transported on the railroads of the United States during the year 1893 amounted to 757,464,480 tons; the tonnage of vessels which passed through the Detroit River during the year 1894 amounted to 23,001,000 tons, and the tonnage of the Suez Canal during the year 1894 amounted to 8,039,105 tons. But the traffic of the railroads of the United States constitutes only a part of the "commerce of the globe;" the traffic of the Detroit River is a much smaller part; the traffic of the Suez Canal is a still smaller fraction, and the commerce of the Nicaragua Canal would be only a small fraction of this small fraction of the "commerce of the globe." And yet this phrase has been and is to-day employed to foist upon the government of the United States the enormous expense of constructing the Nicaragua Canal—one of the flimsiest chimeras that ever gained human credence and patronage.

## Fires - Casualties

Edward Dodge, grain dealer of Oakley, Kan., was accidentally killed recently while hunting.

The Bank cotton seed oil mill and gin near Atlanta, Ga., was recently destroyed by fire.

Lloyd Bros' grain elevator at Waveland, Ind., was destroyed by fire February 13. Loss, \$4,000; light insurance.

The Empire Elevator at Kansas City, Mo., was damaged by fire February 14 to the extent of \$20,000; insured.

Marco Govanovetch's cotton seed oil mill at Natchitoches, La., was recently destroyed by fire, entailing a loss of \$35,000.

Summons & Co.'s granary at Itaska, Texas, was burned February 19, together with a quantity of grain. Loss, \$2,000; insurance, \$200.

The hay and grain establishment of E. Hinnan & Son at San Jose, Cal., was destroyed by fire February 12. Loss on building and contents, \$2,500; insurance, \$400.

Otto Zastron fell from a car at D. L. Thompson's elevator at Hastings, Minn., February 17, while loading grain, and sustained a severe wound on his head.

A portion of the floor of an old building at Boston, Mass., which was used as a grain store, gave way recently. As it happened, no one was injured and the damage was slight.

A cotton seed oil mill at Clarksdale, Miss., was destroyed by fire on the morning of March 11, together with a large quantity of seed. Loss \$80,000 to \$100,000; partially insured.

John Lewis of Coffeyville, Kan., grain buyer for Hall & Robinson, Kansas City, Mo., was struck by a train at Chetopa February 26, and soon afterward died from the injuries received.

Joseph Henderson was recently slightly injured while at work in a car at Henderson Bros' elevator at Gladbrook, Iowa. He fell against the car door, and he and it fell to the ground.

The elevator at Rosebank, Man., which belonged to Thomas Nichol of Wawanesa, was burned February 16, together with considerable grain. Estimated loss about \$8,000; well insured.

J. M. Tracy, engineer in D. N. Dunlap's elevator at Atlantic, Iowa, recently met with a serious accident. While mending a leak in a grain spout near the top of the elevator, the board on which he was standing broke, causing him to fall a distance of 40 feet. For-

tunately, he struck a rod about 7 feet from the bottom, which broke the fall and probably saved his life.

J. B. Ham & Co.'s elevator and grist mill at Lewiston, Me., was burned March 4, together with considerable grain, etc. Loss, about \$9,000 on stock, \$10,000 on building; insurance \$10,000.

Strong & Miller's elevator at Olivia, Minn., was destroyed by fire March 4, together with 5,000 bushels of grain. The loss is partially covered by insurance. The fire caught from a hot box.

The Bassett elevator and mill, near Elmore, Ohio, were destroyed by fire February 24. Loss, \$43,000; insurance, \$25,000. William Lawler, an employe of the elevator, was fatally injured while fighting the flames.

Joseph Mount's hay press buildings at Borden-town, N. J., containing 1,000 bushels of rye, a large quantity of bran, hay and straw and two hay presses, were destroyed by fire February 21, entailing a loss of \$3,000; no insurance.

An elevator at Coleridge, Neb., collapsed recently under the weight of 7,000 bushels of wheat. The loss entailed in the collapse of an elevator built by country barn-builders would pay for the erection of one by a responsible company.

Smith Crawford's elevator and warehouse at Youngstown, O., which was filled with hay, grain and flour, was destroyed by fire February 10, the origin of which is unknown. The loss amounted to \$20,000; insurance on stock, \$4,000.

An accident of a kind which has been getting too common of late, recently cost a young man his life. Charles Dixon, who was employed at the flour mill at Ellicott City, Md., which belongs to the C. A. Gambrell Mfg. Co., was operating a steam shovel in unloading a car on February 29, when suddenly the rope caught him and drew him up to the winding drum, where he was instantly killed. What makes the accident more distressing is that Mr. Dixon was an exemplary young man, only 27 years old, and leaves a young wife and child. This should serve as a warning to employes and employers alike.

The Minneapolis Terminal Elevator Co.'s elevator "A2" at Minneapolis, Minn., containing 1,060,000 bushels of wheat and 15,680 bushels of rye, was destroyed by fire on the morning of March 2. The loss on the building is \$100,000, on grain \$500,000. There was an insurance of \$85,000 on the building, on 249,747 bushels of wheat belonging to the Washburn-Crosby Co. \$126,000, on the remainder of the wheat, belonging to G. W. Van Duzen & Co., \$414,500, making the total insurance \$625,500, more than covering the total loss. A great deal of the wheat will be saved; 40 to 50 per cent., the insurance men estimate. The origin of the fire is only conjectural; the watchman discovered it about 7 o'clock in the stair tower at one end of the building. A fire inspector says: "Had not the wind been favorable elevator 'A1' would have gone also. As it was it caught fire several times. The fire occurred in the stairway of 'A2' and seemed to run to the top instantly. Twenty minutes after the alarm was received the tank and cistern were empty, showing that a large number of heads must have opened. The origin of the fire is unknown. The favorite theory is that its rapid spread was due to dust. The loss demonstrates that there should be a complete cut-off above the first floor in the stairways in this class of risks; also that the city water supply to the cisterns should be ample. The inlet should be at least as large as the suction from the pumps or water should be taken direct from mains of sufficient size. The loss will shake the faith of underwriters in this class of risks, as all three sources of water supply, pressure tank, pump and city, performed their functions perfectly."

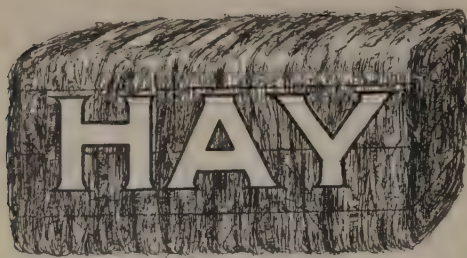
## OUR CALLERS

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

F. Riddell, DeKalb, Ill.  
Ernst Beutke, Earlville, Ill.  
C. H. Terry, Union Mills, Ind.  
C. G. Hammond, of the Huntley Mfg. Co., Silver Creek, N. Y.  
L. E. Barbeau, President of the S. Howes Co., Silver Creek, N. Y.  
Capt. John O. Foering, Chief Grain Inspector, Philadelphia, Pa.  
F. J. Weber, President of the Steel Storage and Elevator Construction Co., Connerville, Ind.

The North Carolina Experiment Station, in a bulletin on "Cotton Seed Hulls and Meal for Beef Production," states that "cotton seed meal does not increase the digestibility of cotton seed hulls," and that the manurial value of such a ration is in all cases materially greater than the cost of the foods composing it.





Frazer & Co., dealers in hay, etc., of New York City, assigned recently.

The Maritime Hay and Chopping Co. has been incorporated at Amherst, Nova Scotia, with a capital stock of \$3,200, to chop hay, chaff, etc.

A suggestion of a subject for discussion at the next meeting of the National Hay Association: The Utility and Advantage of Local Hay Associations.

Alexander Sellars, an extensive hay dealer and farmer of Sabina, Ohio, assigned recently. The total assets are estimated at \$20,000, while the liabilities are \$15,000.

Farmers of Central Illinois are baling shredded corn. The first load of this substitute for hay was marketed recently at Minonk, where it brought \$12.50 per ton.

The members of the new Hay Committee of the Philadelphia Commercial Exchange are S. B. Gilpin, C. M. Rogers, F. P. Warren, Sanders McSparran and R. Greenwood Jr.

The revenue bill presented some time ago in Congress providing for an increase of 15 per cent. in the specific duties on imports would increase the duty on hay 30 cents, making it \$2.30.

The following members have been appointed a Hay Committee of the Montreal Board of Trade: John Crowe, John Babillard, Wm. Cunningham, Joseph Quintal and C. B. Esdaile.

Hay men are already manifesting an interest in the next annual meeting of the National Hay Association and are beginning to discuss the question of the proper place for it to be held.

John Q. Adams' grain barn at Westport, Conn., was burned February 24, together with 25 tons of hay, straw and corn stalks. Loss, \$1,500; no insurance. The origin of the fire is unknown.

James Irish's hay barn and feed mill at Clinton, Wis., was destroyed by fire, together with a quantity of hay and feed, February 17. Loss \$6,000; insurance \$1,000. An incendiary caused the fire.

Eleven cities have so far adopted the National Hay Association's rules for grading. Richmond, Va., is the latest one to do so, the others being Chicago, St. Louis, Kansas City, Cincinnati, Cleveland, Baltimore, Philadelphia, Pittsburg, Buffalo and Washington.

The Cathode ray might be used to locate the load of bricks that farmers sometimes put into a bale of hay by mistake. But that old method really seems to be going out of existence, and as science doesn't run altogether in one direction, enterprising farmers will doubtless keep up with the times.

The Kansas City, Ft. Scott and Memphis Railroad's warehouse at Rosedale, Mo., was burned recently, together with 2,000 tons and 5 cars of hay which belonged to J. A. Brubaker & Co., commission, hay and grain dealers of Kansas City. The loss on the hay is about \$12,000, partially insured.

It is said that shredded corn fodder is not only a rich, nutritious feed, but that it is far superior to straw for bedding. The soft pith of the corn stalk, heretofore a waste product, may be harvested now and put into city and foreign markets. Farmers are baling this fodder hay in the same way as timothy or any other hay is baled. They make sweeping claim for its good qualities.

W. R. Mumford & Co. of Chicago have recently received inquiries for hay from Cape Town, South Africa. One house there sent an order for a ton of hydraulic-pressed choice timothy, and for samples of other grades, with the assurance that if quality was right and price not exorbitant orders for large quantities would be placed. This is the first time orders for hay have come from that direction and it indicates how short feed stuffs are there.

Railroads of Kansas City have adopted new minimum weights for hay, as follows: For cars of 30 feet and under, 16,000 pounds; over 30 feet to and including 32 feet, 18,000; over 32 feet to and including 34 feet, 19,000; over 34 feet, to and including 36 feet, 20,000; 36 feet and over, 22,000. Of course it is presupposed that the railroad companies furnish cars that will enable shippers to comply with the rule; but it will undoubtedly work a hardship to some—those who do not know how to bale hay properly or who

have baling presses that are not equal to the task. Otherwise this raising of the minimum will undoubtedly be beneficial to both shippers and receivers of hay.

A regular small Napoleon in hay transactions has come to light in Montreal, where it has been discovered that a person known as R. L. Prieur, a hay dealer, obtained advances from banks of considerable sums on forged bills of lading. He had a great deal of hay last summer and dealers wondered how he could carry it. He succeeded in this business in New York also, where he sold a number of forged bills, and then went to Mexico for his health.

As an example of what railroads can do in the way of providing hay storage facilities at other markets, and with the suggestion that Chicago railroad officials might find something to think about, we present the following, which is the hay storage capacity of the different lines running into Boston: Boston & Maine, 450 cars; Fitchburg, 150 cars; Boston & Albany, 120 cars; New York & New England, 17. This makes a total storage capacity of 737 cars.

The National Hay Association now has a Committee on Political Action, consisting of Willis Bullock, chairman; J. D. Carscallen of Jersey City, Stephen Thornton of Skaneateles, N. Y.; C. Hatcher of Tiffin, Ohio; Geo. C. Warren of Saginaw, Mich., and Jas. B. Carter of Chicago. The object of the committee is to bring about the reestablishment of the tariff on hay. Petitions are being circulated among farmers and hay men, and when they are gathered in the committee will probably act.

The case of the Kansas City Hay Dealers' Association against J. M. Gibbons, of the Western Hay Co., in which he was charged with forging inspection certificates, has been dismissed. H. M. Ripley, the prosecuting witness in the case, said that he shipped Mr. Gibbons two cars of hay, on which he drew \$41 and \$36, and which, according to his evidence, was more than the hay was worth at his station. He shipped the hay for choice and it graded No. 2, which was considered as evidence that he had not lost anything through Mr. Gibbons.

A company to be known as the Chicago Hay and Warehouse Storage Co. has been organized in Chicago to construct warehouses for the storage of hay. The company will be incorporated under the state laws, with a capital of \$50,000, which will, of course, be largely increased. It is the intention to construct at least five large warehouses for the storage of hay. Prominent Chicago capitalists are behind the enterprise. This is a departure which is indeed commendable, but just the same it doesn't relieve the railroads, which should long ago have undertaken the enterprise for which this company has been formed.

The Montreal Trade Bulletin tells of a New York hay dealer's sharp transactions with Montreal shippers, of which this is one: A Montreal shipper sold a New York dealer two cars of hay at a stipulated figure delivered in the latter city, and about the time the hay was expected to be in New York, the buyer in that city telegraphed the shipper to the effect that the hay had arrived and he would pay draft if \$20 per car were deducted from the amount of the invoice price. The shipper at once wrote another firm in New York to look after the two cars and report, and the reply was that the two cars had not arrived in New York.

Prominent Chicago capitalists have incorporated a company to erect a system of buildings for the storage of hay and to afford relief from the primitive methods to which that city has adhered since the time it was a village. The control of the hay market will not be delegated to any individual or group of persons, and the trade at large will be able to secure an interest in the enterprise. A central warehouse will be located on the Belt line, and others at points convenient to receivers and shippers. Hay will be consigned directly to these warehouses, instead of being permitted to become sidetracked, as at present, to the inconvenience and loss of all concerned. The receipts at Chicago vary from 1,000 to 2,000 tons daily. Very often as many as 50 cars of hay remain on switches because of the lack of team track accommodations. Much complaint has also been lodged against the sampling of hay under these circumstances.—Pantagraph, Bloomington, Ill.

The maintenance of pleasant relations with shippers is a serious problem for all receivers. Realizing this fact the Union Grain & Hay Co. of Cincinnati erected its West End Transfer House some time ago. This house is 50 feet wide and 200 feet in length, with an eight foot platform surrounding it, with roof extending over same. On each side of the house are two large stationary platform scales, built even with the floor. When a car is sent in it is carefully weighed as it arrives, undisturbed, on a track scale. The contents are then removed by large trucks, holding from four to ten bales each. These trucks are drawn upon the platform scale nearest to the car, and the weight of same with the number of bales is called off to a man who devotes his entire time to entering the weights of each truck load. This man is not permitted to leave his stool until the entire car

is unloaded, which prevents any chance of a truck getting by without receiving proper attention. After the contents of the car are removed, the truck weights are carefully added up and the empty car is weighed on the track scale. The truck weights are then compared with the net track weights, and if they fail to agree investigation is immediately made. This system does away with that hobgoblin to shipper and receiver—shortweights.

The exports to the United Kingdom of Canadian and United States hay in 1895 amounted to 118,795 tons, compared with 254,214 in 1894, and 263,050 in 1893. High prices in America this winter have cut off much of the export business, the United Kingdom buying but 424 tons in the United States during December, against ten times that much a year earlier. Commenting upon the vicissitudes of the foreign hay trade the Orange Judd Farmer says: Two or three years ago, when there was a deficiency in the United Kingdom, purchases abroad were rapidly developed, followed by a partial collapse last year. The result was quite different from that which often follows the taking down of the old and opening up of the new sources of supply. The partial failure of the English crop in 1893 greatly increased the imports into that country, which were continued in 1894, thence began to fall off rapidly under better supplies at home. Prices in England to-day afford little profit to exporters. Eight countries which tried to trade in 1894 gave it up entirely in 1895. These are South Russia, Spain, Italy, Greece, Turkey, Tripoli, Tunis and the Cape of Good Hope. On the other hand, last year brought trial shipments from Sweden and New South Wales, while Argentina's exports to England, though small, were double those of the previous year.

#### MINIMUM WEIGHTS FOR HAY.

It is rumored that hay shippers along the line of the K. C. F. S. & M. road are making an effort to have the new minimums reduced to the old basis. We think after having heard the evidence from both sides of this question, that after the country has had sufficient time to unload the stocks of loosely baled hay and to adjust their weights to conform to the new minimums, they will find it much to their advantage. We believe an equitable plan would be to allow the shipper to load on the light baled hay under the former minimum until he could get rid of that class of hay, and then hold them to the minimums on all hay baled afterward. There is no question but what there is a large amount of hay baled and stored that cannot be loaded to the minimum, and shippers should be allowed to save the excess freight on this hay. Then the state of the market should be considered by railroads and the impossibility of shipping at a profit when minimum is loaded, letting alone paying excess freight. The minimums recently adopted are in line with those of southern roads, and much closer to those of roads east of the river, and will abolish the expense of unloading into warehouse and transferring in order that weight may be in car, and consequently increase the value of the hay shipped out. Kansas City ships at least 75 per cent. of the hay received on this market, hence what is good for the shipping trade out of Kansas City is good for the shipping trade into Kansas City. The light baled trade is all local, but the local trade can accommodate itself to the kind of hay it can get and will do it.—Haymaker.

#### WANT DUTY ON HAY DOUBLED.

A committee, appointed by the President of the National Hay Association, consisting of Willis Bullock, Canajoharie, N. Y.; J. D. Carscallen, Jersey City, N. J.; Stephen Thornton, Skaneateles, N. Y.; C. Hatcher, Tiffin, Ohio; George C. Warren, Saginaw, Mich.; James B. Carter, Chicago, Ill., has sent out a circular from which we take the following:

As the hay trade of the states has been seriously disturbed, owing to Canadian shipments of that commodity into the seaboard markets, to the extent of 334,854 tons, during the 17 months ending Nov. 30, 1895, for which \$2,571,298 of American money was taken out of the country, and which had the effect, not only of creating a low standard of prices in those markets, but which standard was reflected over American markets in the interior, much to the detriment of the producer, which condition it is believed will continue in a great measure as long as the present rate of duty exists.

The National Hay Association through its President, Mr. George S. Blakeslee, has appointed a committee on legislative action: One of its objects being, that of greater protection to American agriculture, and as the hay interests of the states have grown from a product of 19,083,896 tons in 1860, to that of 70,000,000 tons in 1894, representing a value of \$600,000,000, and standing second in value of farm products of America, it has been deemed advisable to impress upon Congress the wish of the people by presenting a petition, as other commercial interests have done, and with good effect.

It should be remembered that imported hay has not only made prices in American markets during the present season, but also during preceding years, the imports for the year ending June 30, 1895, being 201,909 long tons, valued at \$1,443,916, and for the



five months following to Nov. 30, 1895, 132,952 tons, valued at \$1,137,382, or nearly as much in the first instance as the total during the three years prior to 1891-92-93, when the imports of hay were valued at \$2,125,367, an average of \$709,455 per year.

On the principle that one party with ten cars of hay or any other product can make the price on his competitor's 100 in any market, it is plainly shown that under the present rate of duty imported hay is able to fix prices at which the American product must be sold, whether the crop is abundant or otherwise, and is compelling Uncle Sam to borrow to meet running expenses, instead of putting into his pockets that which would enable him to pay his hired help, and lay aside a sum to liquidate the mortgage now upon his farm.

The committee has also sent out the following petition to be signed and mailed to Willis Bullock, Canajoharie, N. Y.:

To the Honorable Chairman of the Ways and Means Committee, House of Representatives, Washington, D. C.

Knowing that the wealth and prosperity of this country originate at the farm and mine, and as history teaches that all periods or waves of prosperity have followed a high protective tariff, while those of depression have followed a low rate of duty, demonstrate that the interests of the American people are best served by a high rate of tax on imports. Therefore, we the undersigned, representatives of the hay trade and agricultural interests of the United States, ask that Congress take active measures toward restoring the duty on agricultural products to the scale of 1890.

Note.—Attach paper with names.

#### REVIEW OF CHICAGO HAY MARKET.

The prices for hay ruling in the Chicago market during the last four weeks, according to the Trade Bulletin, were as follows:

During the week ending February 15 the receipts of hay were 7,913 tons, against 9,514 tons the previous week; shipments for the week were 3,411 tons, against 4,522 tons for the previous week. A dull and dragging market was experienced. The arrivals showed a slight falling off, but the demand continued light from all sources. Local dealers taking hold sparingly, they had liberal stocks on hand at the end of the week. Inquiry for shipment moderate, the low prices ruling stimulating the demand somewhat. Prices showed no material change, though the feeling was easy. Sales of Choice Timothy ranged at \$12.00@12.75; No. 1, \$11.50@12.00; No. 2, \$10.00@11.00; No. 3, \$9.50; not graded, \$8.00@11.50; Choice Prairie, \$8.25@9.00; No. 1, \$7.50@8.00; No. 2, \$6.50@7.50; No. 3, \$7.00; No. 4, \$6.00. Straw was in large supply and very dull. Rye straw sold at \$5.00@6.50, and oat straw sold at \$5.25@6.00.

During the week ending February 22 the receipts of hay were 5,857 tons; shipments 2,710 tons. Although the arrivals showed a falling off, no material improvement could be noted in the market for timothy or prairie hay. The receipts continued liberal and amount on sale large. Only a moderate inquiry existed, both on local and shipping account, and the

market ruled dull. No particular change occurred in prices. Sales of Choice Timothy ranged at \$11.75@12.50; No. 1, \$11.00@12.00; No. 2, \$10.00@11.00; No. 3, \$9.00; not graded, \$9.00@12.00; Choice Prairie, \$8.25@9.00; No. 1, \$7.50@8.00; No. 2, \$6.50@7.50; No. 3, \$6.00. Straw was very dull; offerings large and prices declined about 50 cents per ton. Rye straw sold at \$4.75@6.00, and oat straw at \$5.00.

During the week ending February 29 the receipts of hay were 8,044 tons; shipments were 4,975 tons. With large arrivals and only a moderate demand the market for both timothy and prairie hay ruled very dull. The bulk of the offerings consisted of coarse and off color hay, for which there was very little inquiry, and receivers found it almost impossible to effect sales. Only choice, sound hay was wanted. At the close a steadier feeling prevailed, partly due to lighter receipts, though prices show no improvement. Sales of Choice Timothy ranged at \$11.75@13.00; No. 1, \$10.50@12.00; No. 2, \$10.00@10.50; No. 3, \$9.00; not graded, \$10.25@11.00; No. Grade, \$6.00; Choice Prairie, \$8.25@9.50; No. 1, \$7.50@8.50; No. 2, \$7.00@7.50; No. 3, \$6.00@6.50. Rye straw sold at \$5.50@6.00, and oat straw at \$5.00@5.50.

During the week ending March 7 the receipts for the week were 7,739 tons; shipments 4,613 tons. The offerings of timothy hay were only moderate. A very fair inquiry existed both on local and shipping account, and a steady feeling prevailed. Prices exhibit no material change. The market for upland prairie was dull and depressed throughout the week. Arrivals large and demand light from all sources. Prices ruled weak and slightly lower. Sales of Choice Timothy ranged at \$12.00@12.75; No. 1, \$11.00@12.00; No. 2, \$10.00@10.50; No. 3, \$8.50@9.50; not graded, \$8.50@12.50. Choice Prairie, \$8.50@9.25; No. 1, \$7.50@8.50; No. 2, \$6.50@7.25; No. 3, \$5.75@6.25; No. 4, \$6.00. Rye straw sold at \$5.75@6.00; wheat straw at \$5.50, and oat straw at \$4.00@5.50.

#### FINDING THE VALUE OF A LOAD OF HAY.

Everyone who handles hay will find that the time and labor of weighing and the computing of values will be greatly lessened with the use of the table given herewith. This table can be pasted on a piece of thick cardboard and hung beside the scale beam. By putting the card in a frame and covering it with glass it can be used for an indefinite time. The use of this table will save time and prevent many errors in multiplying.

The price per ton of 2,000 pounds being known, it is very easy to find the value of any fraction of a ton at \$4 to \$18 per ton. If a farmer has 1,565 pounds of hay on his wagon and the dealer has bought it at \$7 per ton, he finds by looking across the table from 1,500 pounds to the column at the top of which is \$7 that the value of 1,500 pounds at \$7 per ton is \$5.25, the value of 60 pounds .21, and the value of 5 pounds .02, making a total of \$5.48. If the price was \$7.50 per ton he would also find the value of 1,565 pounds at 50 cents per ton and add \$5.48, to the value at \$7 per ton. To find the value at 50 cents, first find it at \$5, and take one-tenth of that sum. The value of 1,500 pounds at \$5 is \$3.75; at 50 cents it is .375.

TABLE FOR FINDING THE VALUE OF A LOAD OF HAY.

Lbs.	\$4.00	\$5.00	\$6.00	\$7.00	\$8.00	\$9.00	\$10.00	\$11.00	\$12.00	\$13.00	\$14.00	\$15.00	\$16.00	\$17.00	\$18.00	Lbs.
10	.02	.03	.03	.04	.04	.05	.05	.06	.06	.07	.07	.08	.08	.09	.09	10
15	.03	.04	.05	.05	.06	.07	.08	.08	.09	.10	.11	.11	.12	.13	.14	15
20	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15	.16	.17	.18	20
25	.05	.06	.08	.09	.10	.11	.13	.14	.15	.16	.18	.19	.20	.21	.23	25
30	.06	.08	.09	.11	.12	.14	.15	.17	.18	.20	.21	.23	.24	.26	.27	30
40	.08	.10	.12	.14	.16	.18	.20	.22	.24	.26	.28	.30	.32	.34	.36	40
50	.10	.13	.15	.18	.20	.23	.25	.28	.30	.33	.35	.38	.40	.43	.45	50
60	.12	.15	.18	.21	.24	.27	.30	.33	.36	.39	.42	.47	.48	.51	.54	60
70	.14	.18	.21	.25	.28	.32	.35	.39	.42	.46	.49	.53	.56	.60	.63	70
80	.16	.20	.24	.28	.32	.36	.40	.44	.48	.52	.56	.60	.64	.68	.72	80
90	.18	.23	.27	.32	.36	.41	.45	.50	.54	.59	.63	.68	.72	.77	.81	90
100	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	100
200	.40	.50	.60	.70	.80	.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	200
300	.60	.75	.90	1.05	1.20	1.35	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	300
400	.80	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.25	3.40	3.60	400
500	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	500
600	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.30	3.60	3.90	4.20	4.50	4.80	5.10	5.40	600
700	1.40	1.75	2.10	2.45	2.80	3.15	3.50	3.85	4.20	4.55	4.90	5.25	5.60	5.95	6.30	700
800	1.60	2.00	2.40	2.80	3.20	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	800
900	1.80	2.25	2.70	3.15	3.60	4.05	4.50	4.95	5.40	5.85	6.30	6.75	7.20	7.65	8.10	900
1000	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	1000
1100	2.20	2.75	3.30	3.85	4.40	4.95	5.50	6.05	6.60	7.15	7.70	8.25	8.80	9.35	9.90	1100
1200	2.40	3.00	3.60	4.20	4.80	5.40	6.00	6.60	7.20	7.80	8.40	9.00	9.60	10.20	10.80	1200
1300	2.60	3.25	3.90	4.55	5.20	5.85	6.50	7.15	7.80	8.45	9.10	9.75	10.40	11.05	11.70	1300
1400	2.80	3.50	4.20	4.90	5.60	6.30	7.00	7.70	8.40	9.10	9.80	10.50	11.20	11.90	12.60	1400
1500	3.00	3.75	4.50	5.25	6.00	6.75	7.50	8.25	9.00	9.75	10.50	11.25	12.00	12.75	13.50	1500
1600	3.20	4.00	4.80	5.60	6.40	7.20	8.00	8.80	9.60	10.40	11.20	12.00	12.80	13.60	14.40	1600
1700	3.40	4.25	5.10	5.95	6.80	7.65	8.50	9.35	10.20	11.05	11.90	12.75	13.60	14.45	15.30	1700
1800	3.60	4.50	5.40	6.30	7.20	8.10	9.00	9.90	10.80	11.70	12.60	13.50	14.40	15.30	16.20	1800
1900	3.80	4.75	5.70	6.65	7.60	8.55	9.50	10.45	11.40	12.35	13.30	14.25	15.20	16.15	17.10	1900
2000	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	2000

## Items from Abroad

The net imports of wheat into France in January amounted to 92,000 quarters (of 480 pounds each); flour, 13,500 sacks.

Exports of rye from Black Sea and Danubian ports from August 1, 1895, to February 22, were 2,485,000, against 3,184,000 quarters (of 480 pounds each).

Russian and Black Sea exports from August 1, 1895, to February 22, compared with the same time in the previous season, included: Wheat, 13,126,000, against 11,333,000 quarters (of 480 pounds each); corn, 640,000, against 1,867,000 quarters (of 480 pounds each); barley, 6,478,000, against 8,170,000 quarters (of 400 pounds each).

Last year Chilean wheat to the amount of 1,185,000 bushels was imported into Peru. United States Consul Jastremski at Callao, who reports the fact to the State Department, says this wheat is not well adapted to the making of white bread or pastry, and it cannot bear comparison with California white wheat, which might easily command the Peruvian market if there were a line of direct steam communication down the coast.

Exports from Russia from August 1, 1895, to February 15, 1896, compared with same time of the preceding year, were: Wheat, 7,596,500, against 7,956,000 quarters (of 480 pounds each); rye, 2,484,300, against 2,744,000 quarters (of 480 pounds each); barley, 4,290,700, against 5,999,800 quarters (of 400 pounds each); oats, 3,905,800, against 3,759,500 quarters (of 304 pounds each); corn, 402,150, against 342,500 quarters (of 480 pounds each).

Argentine shipments of wheat to Europe from January 2 to February 20 amounted to 374,500 quarters (of 480 pounds), against 563,000 quarters in the same time in 1895; the total exports during the year 1895 being 3,166,000 quarters, against 6,881,000 in 1894 and 3,932,000 in 1893. Exports of corn from Argentina from January 9 to February 20 amounted to 737,500 quarters of 480 pounds each, the total exports of corn in 1895 being 3,659,500 quarters.

Grain standards have been established at Buenos Ayres, Argentine, for wheat and corn. Type samples (numbered for reference) representing various descriptions of wheat will be from time to time sent to the Corn Trade Associations of London, Antwerp and Liverpool and certificates will be granted "about as per sample" for cargoes or parcels that correspond to such type samples. Owing to the difficulties of grain handling and minor irregularities of quality a perfectly even quality cannot be guaranteed, but no certificate will be granted unless the lot of wheat is fairly even throughout.

## OBITUARY

Wm. A. Brown, a member of the commission grain and hay firm of M. J. & W. A. Brown of Baltimore, Md., died recently.

Geo. T. Bowler, a member of the firm of Marsh, White & Co., jobbers in grain, feed, etc., at Brooklyn, N. Y., died March 1.

John Lewis, at one time one of the leading grain brokers of the Chicago Board of Trade, died March 2 in Florida, where he had resided for some years.

N. H. Wolfe of New York City died February 22, aged 62 years. Mr. Wolfe, who was a retired grain merchant, was one of the oldest members of the Produce Exchange.

Samuel Ketcham, a young man well known in the grain trade of the New York Produce Exchange, died February 16, aged 39. For several years Mr. Ketcham has bought grain for several horse car lines, having succeeded his father in that business in 1884.

Hon. M. D. Harter, president of the Inter State Grain Co., and of the Isaac Harter Milling Co., Fostoria, Ohio, committed suicide February 22 by shooting himself. It is believed that he was suffering from a temporary fit of insanity. Mr. Harter was born in Canton, Ohio, April 6, 1846. He served two terms in Congress and his public and private life was in every way exemplary, and he met with success in everything.

The Interstate Commerce Commission recently decided, in the case of Milton Evans and H. D. May (representing the farmers of Walla Walla County, Washington) vs. the Oregon Railway and Navigation Co., that the freight rates on grain were too high, and ordered a reduction equivalent to 2.4 cents per bushel between Walla Walla and Portland, and other reductions in proportion.



## Court Decisions

### Right to Commissions.

When a salesman has contracted with his employer to sell goods in a certain territory, but at the request of his employer sells goods outside of such territory, he may recover his usual commissions on such sales.—*McEwen vs. Loucheim* (Sup. Ct. S. C.), 20 S. E. Rep., 519.

### Recovery of Freight by Purchaser.

Freight paid by the purchaser of a machine is recoverable as damages for breach of warranty of the machine where the freight was made, by the contract of purchase, a part of the purchase price.—*Briggs vs. Rumely Co.* (Supreme Court of Iowa), 64 N. W. Rep., 784.

### When Machinery Becomes a Part of the Realty.

Machinery placed in a building and fastened by bolts to a brick foundation thereby becomes a part of the realty, and with the latter subject to an existing vendor's lien thereon.—*Simpson, Hartwell & Stopple vs. Masterson* (Court of Civil Appeals of Texas), 31 S. W. Rep., 419.

### Stoppage in Transit.

Where a seller, as soon as he hears of the closing of a customer's store by levies of attachment, endeavors to exercise his right of stoppage in transitu, the mere attachment of the goods before delivery to the customer will not defeat such right.—*Bayonne Knife Co. vs. Umbenhauer* (Supreme Ct. Ala.), 18 So. Rep., 175.

### Delivery of Goods to Wrong Person by Carrier.

Where a carrier delivers goods to the wrong person, the fact that the owner receives payment from such person for a portion of the goods does not constitute a waiver of his claim against the carrier for the balance if he does not intend such waiver. *Lester v. Del. L. & W. R. Co.* (Supreme Ct. 4th Dept.) 36 N. Y. S. Rep. 907.

### Car Service Association.

That there may be a reasonable charge for the detention of the carrier's cars by the consignor or consignee beyond a reasonable time within which to load or unload them, and that such charges may be imposed and enforced through what are known over the country as "car-service associations," the Court of Appeals of Kentucky holds (*Kentucky Wagon Mfg. Co. v. Ohio & M. Ry. Co.*, 32 S. W. Rep. 595) must now be considered as well settled.

### Statements as to Renewals.

When the agents of an insurance company, who are duly authorized to solicit and make contracts of insurance, deliberately represent to the insured that a given policy issued by the company has been renewed, and subsequently receive and appropriate money which the latter has good reason to believe is paid to cover the cost of such extended insurance, the United States Circuit Court of Appeals holds (*International Trust Co. v. Norwich Union Fire Ins. Soc.* 71 Fed. Rep. 81) that the company will be estopped to allege, after a loss has occurred, that the policy in question was not renewed.

### Contract for Seed Wheat.

A farmer named Bjorgo, who owned 320 acres of land in the town of Cuba, Kansas, mortgaged the same in March, 1889, for \$1,400. Subsequently he applied to the county for seed grain, which was furnished under the statute which provided that the cost of such grain should be taxable against the real and personal property of the applicant. Judge Searle holds that such a debt is not a tax and cannot be made one, but simply a contract by the applicant with the county, upon which contract the county may sue, obtain judgment and issue execution as for any other debt. He also holds that as against the prior mortgage the lien so obtained would be subsequent and second to the mortgage or other lien.

### Must Provide Fit Cars.

It is the duty of a common carrier to provide a good and sufficient vehicle for transportation purposes. The rule that in making the contract for carriage the consignor acts as the agent of the consignee, the Supreme Court of Illinois (*Chicago & A. R. Co. v. Davis*, 32 N. E. Rep. 382) holds does not apply so as to relieve the carrier from its obligation in this respect to the consignee, by reason of its having an arrangement with the consignor, by which the latter is to attend to the inspection of the qualities of the cars furnished for a certain purpose as refrigeration. Nor will a clause in the bill of lading, which provides that the carrier shall not be liable "for decay of perishable articles, or injury by heat or frost," relieve it for liability, arising from its own

negligence in furnishing a defective refrigerator car.—*Business Law.*

### Bill of Lading—Stipulation.

The Supreme Court of Louisiana decided recently the case of *Maxwell et al. vs. Southern Pacific Railroad Company*, which arose upon an action to recover the value of 110 bales of cotton that were destroyed by fire while in possession of the defendant at its depot, or the vicinity thereof, in New Iberia, the same having been delivered to the defendant for transportation over its road from the parish of Vermillion to the city of New Orleans. The court held that a stipulation in a bill of lading for the transportation of cotton in bales, by steamboat and a railroad as a connecting carrier for hire, that neither shall be responsible for damage which shall be occasioned by fire, does not exonerate either from responsibility for such damage as shall result from fire that is occasioned through the fault or ordinary negligence of the agents, servants or employees of the carrier; that notwithstanding such a stipulation in a contract of affreightment, the carrier is bound to use due care and watchfulness in the protection and safe delivery of the goods of the shipper, and that if the care demanded was not exercised, the case is one of negligence, and a legal liability is made out when failure is shown.

## The EXCHANGES

Tickets of membership to the New York Produce Exchange are quoted at \$375.

Membership tickets to the Chamber of Commerce of Minneapolis are selling at \$225.

The initiation fee of the Baltimore Corn and Flour Exchange has been reduced to \$250.

We are indebted to Secretary Elwyn G. Preston for a copy of the tenth annual report of the Boston Chamber of Commerce for 1895.

M. McLaughlin has been chosen Chairman of the reorganized grain section of the Toronto Board of Trade. The membership fees have been fixed at \$2, and a considerable membership has already been enlisted.

We have received from Secretary Edgar A. Wills the annual report of the Board of Trade of Toronto for 1895. It is distinct from reports of most Boards in having an engraved cover design which is a thing of beauty.

Under the rules of the Chicago Board of Trade members who are trading for outside parties are compelled to furnish their customers with the names of parties with whom they have made trades for their account.

There is said to be a movement on the part of some of the directors of the Chicago Board of Trade looking to the establishment of general trading in 1,000-bushel lots in corn and oats. It was inaugurated in wheat nearly ten years ago.

The Chicago Board of Trade Mutual Benefit Association recently issued a statement showing that there have been six deaths since Oct. 1, 1895, which is unusually heavy, since there had previously been an average death rate of only six per annum.

Kennett, Hopkins & Co., a commission firm of Chicago which was suspended from the Board of Trade last December on the charge of bucket shop keeping, has applied to the Circuit Court for reinstatement, it being alleged that the suspension was illegal and unwarranted.

Our thanks are due Geo. H. Morgan, secretary of the St. Louis Merchants' Exchange, for a copy of the annual statement of the trade and commerce of St. Louis for 1895. It is especially well got up, and the secretary is to be congratulated upon issuing such a complete report so promptly.

The sixty-sixth annual meeting of the Association of Chambers of Commerce of the United Kingdom will be held in London on March 24, 25 and 26. Among the topics to be considered is a proposition favoring the adoption of the metric system, and the fixing of a date after which the system shall become compulsory.

We have received from George Hadrill, Secretary of the Montreal Corn Exchange Association, the fifty-third annual report of the Council of the Montreal Board of Trade for 1895. It also contains an address delivered before the Board by Sir Charles Tupper on "Preferential Trade Relations Between Great Britain and Her Colonies."

The annual meeting of the Board of Trade of Superior, Wis., was held February 17, when a reception and banquet was given to Northwestern grain men. The following officers were elected: President, E. C. Kennedy; first vice-president, Walter Fowler; second vice-president, S. G. Williams; directors for three

years, L. R. Hurd, A. Ruyter and W. B. Banks; board of arbitration, A. Ruyter, W. H. Crumpton, W. C. Brooks, W. H. Barclay, O. H. Perry; Board of Appeals, L. R. Hurd, William Listman, H. A. Johnson, S. G. Williams, Thomas G. Alvord.

For some time the Baltimore Corn and Flour Exchange has debated the question of consolidating with other commercial organizations of that city, and recently on a vote of 206 to 26 it was decided to change the name to the Baltimore Chamber of Commerce. An attempt will be made to consolidate twenty-three other institutions with the Exchange.

Among the committees and officers of the Baltimore Corn and Flour Exchange recently appointed are the following: Arbitration, Charles England, Robert M. Wylie, George T. Gambrell, E. B. Owens and F. T. Smith; margins and clearings, Wm. R. Hammond, L. P. Goldsborough, Thomas Leishear; cloverseed, Walter Kirwan, J. O. Linton, Joseph Tate; chief grain inspector, Charles McDonald.

The new Grain Committee of the Commercial Exchange of Philadelphia, which was recently appointed, is composed of E. W. Barker, Geo. H. Rogers, E. L. Rogers, L. G. Graff, Wm. B. McKnight, Geo. G. Querly, Chas. F. Saunders. The Arbitration Committee is composed of Clarence E. Steel, Chas. E. Culpeper, Joseph Bosler, Sydney Street, A. D. Acheson, J. B. Pultz, Wm. J. Koch, J. C. Klauder, E. Percy Lemont.

We add our congratulations to those tendered by the Buffalo Merchants' Exchange upon the seventieth anniversary of the birthday of William Thurstone, who is in the thirty-third year of his secretaryship of the Exchange. A number of felicitous speeches were made upon the occasion, and the members of the Exchange presented their esteemed secretary with a gift of \$400 in gold as a token of their appreciation of the good services rendered.

H. M. Greene, of the firm of H. M. Greene & Co., has been expelled from the Chicago Board of Trade, the charge being that he did a bucket shop business. The evidence was so conclusive that Mr. Greene pleaded guilty. He succeeded in obtaining an injunction restraining the Board from trying him; but in dissolving the injunction Judge Payne said: "It is well settled, both in principle and by many decided cases, that when a person becomes a member of such an association as the Board of Trade, and agrees to accept and abide by its rules and by-laws, that he is in fact bound by them and cannot be heard to complain."

The membership of the National Board of Trade should be materially enlarged, and its usefulness increased. Members of the different commercial organizations should not imagine that the annual sessions of the National Board of Trade are somewhat of the "junketing" order. The great majority of the delegates are representative men in business, many of whom have investigated the various subjects submitted for discussion, and are able to present interesting papers thereon which serve to educate the people generally. The Board is being organized gradually into standing committees on various subjects, and the results of their deliberations are having more weight and influence with the law making power, and with the leading government officials.—*Trade Bulletin.*

The St. Louis Merchants' Exchange is taking stringent measures against bucket shopping. Amendments to the rules were recently adopted (by a vote of 327 to 138), which enable the Exchange to take action against any members who engage in irregular trading on the floor. One amendment provides for compulsory testifying on pain of suspension or expulsion, and another lays down the rule that all put and call transactions and dealings in futures when on the basis of money added to or deducted from the contract prices, and dealings in differences on fluctuation in the market price of any commodity, without a bona fide purchase or sale of property for actual delivery, shall be deemed irregular. Also any member of the Exchange who is interested in or connected with any individual, firm or organization carrying on irregular trading will be deemed guilty of unmercantile conduct.

The directors of the Chicago Board of Trade have issued the following notice: "The practice of trading in the name of another, or of a firm or corporation—such practice being commonly known as 'clearing trades'—has been brought to the attention of the Board of Directors, with the request that such a rule or regulation be made as will exempt those from liability in whose names trades are made under such practice. Your Directors find that it would be impracticable and unnecessary to adopt any such rule or regulation. Your Board of Directors is advised by the Board's attorney that the persons, firms or corporations, in whose names trades are made under the operation of the practice aforesaid, may be legally held to the fulfillment of their terms, the same as if made by themselves or by their employees unless such persons, firms or corporations have given proper notices that the authority to make such trades in their names has been revoked."



# PRESS COMMENT

## THE METRIC SYSTEM.

Congress unquestionably has the power to adopt the metric system, but the wisdom of making the change mandatory in private business may well be doubted. It is now nearly thirty years since the United States made the metric system legal, but it has not made much headway among the people, though widely employed among professional men and in some cases adopted for standard gauges. It probably would do more harm than good to attempt forcibly to revolutionize the existing system of weights and measures used by the people.—Chicago Tribune.

## ADVERSE TO BOUNTY ON EXPORTS.

Instead of so much work to establish a bounty on crops exported why not concentrate all efforts upon encouraging home production of agricultural produce that is now imported? The latter plan is simpler, and in the present state of public opinion much easier. Instead of artificially stimulating cereal exports to compete in the English markets with grain grown by the cheap labor of Argentine, Russia and India, let us grow more beets, and produce at home the sugar for which the United States now pays out over \$100,000,000 a year.—Market Report, Toledo.

## THE "OFFICIAL VISIBLE."

Reference was made a few days ago regarding the inaccuracies of the "official visible," and as an instance of how the growth of the country has outgrown it we have to refer to the last weekly report wherein Montreal, a shipping market pure and simple, shows an increase in stocks of 156,000 bushels. True, this wheat appears in stocks for the first time there, but it should have been counted where it first appeared, at Port Arthur. There is a primary point which has received upward of 12,000,000 bushels, every pound of which has or will appear in our visible stocks, either at New York or Montreal, instead of where they belong. Manitoba wheat has become an important item in our wheat supplies, and their receipts, shipments and stocks should be kept track of. Strange as it may seem, Manitoba will export as wheat and flour from the 1895 crop fully as large a quantity as does Argentine, and the latter crop is a factor in determining prices from December 1 to May 1, while the former is entirely ignored.—Commercial Record, Duluth.

## PREDICTS HIGHER PRICES.

It is well-known that crops in this country have been under estimated for many years. It is found that the under-estimates are about in the same proportion every year. It is altogether probable that similar methods in other countries bring similar results; that is, if the yield is under-estimated one year, it will be under-estimated another. And if it over-estimated one year it will be over-estimated another. That being so it makes little difference so far as the comparative calculations are concerned, whether the aggregate shows over-estimate or under-estimate, for the comparative results would be practically the same. There is little doubt that these estimates in a comparative sense have been substantially correct and that we are in a direct way to smaller wheat supplies and to consequent higher prices. We will not reach the scare period this year but we will reach a position that will more and more attract public attention with a natural appreciation of average values. Whoever expects the full development of the changing situation at once is doomed to disappointment, for higher averages do not come in a day, when they come from simple decline in production.—Market Record, Minneapolis.

## HOME SEEKERS' EXCURSIONS.

In order to give everyone an opportunity to see the Western country and enable the home seekers to secure a home in time to commence work for the season of 1896, the Chicago, Milwaukee & St. Paul Railway has arranged to run a series of four home seekers' excursions to various points in the West, Northwest and Southwest on the following dates: March 10, April 7 and 21 and May 5, at the low rate of two dollars more than one fare for the round trip. Tickets will be good for return on any Tuesday or Friday within 21 days from date of sale. For rates, time of trains and further details apply to any coupon ticket agent in the East or South, or address F. A. Miller, Assistant General Passenger Agent, Chicago, Ill.

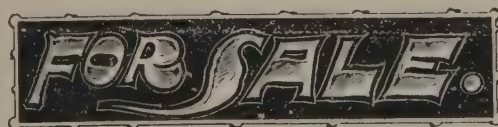
Chas. H. Greene, the ex-city treasurer of Eau Claire, Wis., who was recently sentenced to about four years in the penitentiary for embezzling \$43,000, lost the money he took in bucket shop speculation.

## THE MARKETS

[We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.]

Grain report of Collins & Co., Cincinnati, March 7. There is nothing particularly new that can be said in reference to the market. With the exception of a little easier undertone, without essential change in prices, the existing conditions remain pretty much the same. The failure to realize any advance on stocks carried in warehouses as the season progressed has caused a reduction of same on the part of the trade, which has been to a more or less extent responsible for the light demand that has ruled for some time past. With the depletion that has taken place, the wants of the trade show some improvement and while a larger movement is generally expected, the increased activity will do much to help sustain values. WHEAT.—Is easier and some lower in sympathy with the declines in other markets. The arrivals are still small. No. 2 Red at 72¢@72½ cents. No. 3 Red at 69¢@70 cents. No. 4 at 64¢@65 cents, with the few receipts about all sold. CORN.—Values rule steady, with the arrivals about equal to the inquiry. No. 2 White and No. 2 Mixed at 30¢@30½ cents. No. 3 White and Mixed at 29 cents. No. 2 Yellow at 31 cents, and the market closed steady. EAR CORN.—Is in more active inquiry for clean, choice quality for feeding purposes. Yellow at 31¢@32 cents. Mixed at 30¢@30½ cents. White at 29¢@30 cents. The receipts are small. OATS.—Arrivals are larger and the inquiry is fairly active at slightly lower prices. No. 2 White at 23¢@23½ cents. No. 3 White at 22 cents. No. 2 Mixed at 21½¢@22 cents. No. 3 Mixed at 21 cents and sample lots grading. Rejected at 20¢@20½ cents. RYE.—Is nominal, with the inquiry very small. No. 2 at 41¢@41½ cents. HAY.—Receipts for the week 1,322 tons, shipments 447 tons. For the corresponding week last year the receipts were 2,168 tons, shipments 1,628 tons. The market has ruled easy, with ample offerings for all the requirements of the trade. Receipts show some falling off, and the market is beginning to clean up. At the lower prices ruling, we look for a more active demand. Choice Timothy at \$14.00@14.50; No. 1 at \$13.50@13.75; No. 2 at \$11.00@11.50; No. 3 at \$9.00@9.50. No. 1 Clover and Clover Mixed at \$11.00@11.50; No. 2 Clover and Clover Mixed at \$9.00@10.00, and they are dull, with little wanted. Choice Upland Prairie at \$9.00@9.50. Straw steady at \$5.50@6.00. MILLFEED.—Arrivals are small, with the demand light. Bran and Middlings at \$10.50@11.50.

Grain report of Shanks, Phillips & Co., Memphis, Tenn., March 7.—WHEAT.—Is in good demand, and the market is steady. No. 2 Soft Winter Wheat sells at 76 cents. CORN.—The demand is good and the market is steady. No. 2 White sells at 28 cents. No. 2 Mixed, at 27¢@27½ cents. OATS.—Offerings of Oats are free, with a moderate demand and a lower market. No. 2 White sells at 23 cents. No. 3 White at 22½ cents. No. 2 Mixed at 20½ cents. No. 3 Mixed at 20 cents. HAY.—The market is overstocked, consequently prices are low, and sales are difficult to make. Choice Timothy Hay sells at \$14.50@14.75; No. 1 Timothy at \$13.00@13.25; No. 2 Timothy at \$10.75@11.25; Choice Clover, Mixed, at \$13.00@13.25; No. 1 Mixed, \$11.50@12.00; No. 2 Mixed, \$9.00@9.50; Choice Kansas Prairie Hay, \$8.00; No. 1, \$7.00; No. 2, \$6.00@6.50; Choice Arkansas Prairie, \$6.50.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

## TRACK SCALE.

For sale, very cheap, a 34-foot Foresythe pattern track scale of 60,000 pounds' capacity. The two wooden track beams are new. For price and further information address

I. K. HOSTETTER, Osborn, Ohio.

## IOWA GRAIN AND IMPLEMENT BUSINESS.

Horse power elevator, corn cribs and scale, with implement business in connection, for sale. Located on the C. R. I. & P. R. R. in Western Iowa. For further particulars address

GRAIN AND IMPLEMENTS, care American Elevator and Grain Trade, Chicago, Ill.

## AN ALABAMA BREWERY.

The Montgomery Brewery at Montgomery, Ala., will be sold on April 6, 1896, by order of court. This brewery is a modern plant, in prosperous operation, located in one of the healthiest and most thriving cities in the South. For particulars address

CHARLES E. HAILS, Montgomery, Ala.

## FOUR GRAIN STATIONS.

Four grain stations in Illinois, consisting of elevators, cribs, dumps, etc., for sale. Each station will handle on an average crop 250,000 bushels of corn and oats. Will sell singly or together. Reason for selling, going into other business. Address

P. P., care American Elevator and Grain Trade, Chicago, Ill.

## FAIRBANKS SCALES ON REASONABLE TERMS.

For sale on reasonable terms: Four complete sets of 34-foot Fairbanks Standard Railroad Track Scales of 120,000 pounds' capacity; also one Fairbanks Hopper Scale, capacity 100 bushels wheat. Have been used but little, are in best of condition and as good as new. Address

C. W. PAYNE, Agent Anchor Line, Erie, Pa.

## GRAIN ELEVATOR FOR SALE.

Steam power grain elevator, on Chicago & Alton Railroad, in Missouri, for sale. Convenient to Chicago, St. Louis and Kansas City. Corn sheller, scales, office, etc., complete. Splendid grain country; finest corn crop this season ever known. Very healthy location. Now in operation and rented to good advantage. Address

ELEVATOR, Mt. Leonard, Mo.

## ILLINOIS ELEVATOR AND LUMBER YARD.

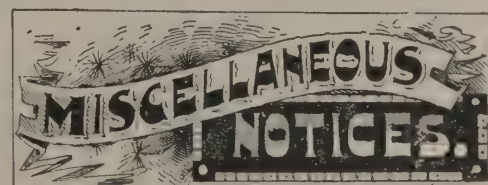
A 20,000-bushel horse power elevator built in 1890, hopper and wagon scales, everything in perfect condition and now in operation. One of the best grain stations in Central Illinois. Lumber yard, the only one in town; best of country around. Will not trade; must sell on account of change of business. A bargain for the right party. Address

E., care American Elevator and Grain Trade, Chicago, Ill.

## IOWA MILLS AND ELEVATORS.

The administrators of the estate of J. J. Wilson, deceased, offer for sale the new Daisy Roller Mills, located at Algona, Iowa, capacity 125 barrels. New throughout one year ago. Steam power, steam heat. Up to date in every particular. Good exchange business and local trade for mill products. With this plant are elevators of 40,000 bushels' capacity, stock yards, line of coal sheds and three houses for employees. Also the Model Roller Mills located at Emmetsburg, Iowa, capacity 150 barrels. Steam power, steam heat. Large local and shipping trade fully established. No near competition. These properties are located in a good wheat section; shipping facilities from both Algona and Emmetsburg are unsurpassed. To close up the affairs of the estate either one or both of these properties will be sold at a great sacrifice. For particulars address

LENETTE W. BUTLER, administrator, Algona, Iowa.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

## ENGINE, BOILER AND SHELLER WANTED.

I want a good, almost new 20 or 25 horse power engine and boiler, separate. Must be guaranteed and cheap. Could also use a No. 3 Victor Sheller and a No. 3 Cornwall Cleaner. Address

HENLEY EVERSOLE, Hindsboro, Ill.

## HAY, STRAW AND OATS WANTED.

Sealed proposals, in triplicate, will be received at the office of the Chief Q. M., Chicago, Ill., and at office of quartermaster, Jefferson Barracks, Mo., until 11 o'clock a. m., central time, March 31, 1896, and then opened, for furnishing hay, straw and oats required at Jefferson Barracks, Mo., during remainder of fiscal year ending June 30, 1896. Proposals for delivery at other points will be entertained. Government reserves right to reject or accept any or all proposals, or any part thereof. Information furnished on application here or to quartermaster of post named. Envelopes containing proposals should be marked "Proposals for Forage" and addressed to undersigned, or quartermaster of post named.

M. I. LUDINGTON, A. Q. M. G., Chicago, Ill.



# HOWES GRAIN CLEANER CO.,

SILVER CREEK, N. Y.

## ANNOUNCEMENT.

This Company, which has just been organized, begs to announce to the milling and elevator trade that it will soon be completely equipped to enter the field as a competitor for the patronage of all who desire to purchase

### GRAIN-CLEANING MACHINERY OF THE HIGHEST PERFECTION.

Among the organizers of the company, there are several gentlemen, who, up to this time and for many years past, had full charge of the important departments of the Eureka Grain-Cleaning Machine Works, of this place, and who now, since the recent sale of the Eureka Works to the proprietor of the foreign distributing agency (London, England), have resolved to engage in the same line of business as members of a new company that is to be conducted in accordance with American ideas.

MR. C. N. HOWES, for more than a quarter of a century connected with the Eureka Works, first, as assistant to his uncle, the late Simeon Howes; next, as executor under his will, and still later as general manager of The S. Howes Company (organized by the heirs of Simeon Howes), will be president of the **Howes Grain Cleaner Co.**, and give his undivided attention to its business affairs.

MR. ELGIN KEITH, connected with the Eureka Works for more than 20 years, who was also a co-executor under the will of S. Howes, and had full charge as superintendent of the works, will be a member of the new company and actively engaged in a similar capacity.

MR. C. A. LANPHERE also leaves the Eureka Works after many years of service to join the new company, and will have charge of the iron-working department. His ability in designing and adapting special machines and tools for the manifold requirements incident to the construction of a full line of grain-cleaning machines has been a potent factor in establishing the reputation of the products of the works where he was heretofore employed.

With these gentlemen there are associated in the HOWES GRAIN CLEANER COMPANY other gentlemen with ample means and some of them with wide experience in the mill-furnishing business.

The Managers of the HOWES GRAIN CLEANER COMPANY bring into their new field of duty a thorough knowledge of the details of the business. They have made a life study of bringing the manufacture of grain-cleaning machinery up to the highest possible standard, and have eagerly watched the progress of mechanical science for any new principle applicable for the greater efficiency of grain-cleaning machines. Improvements which they had planned for the future will at once be incorporated in the machines built at the new works. Shops newly equipped with the most approved devices will insure economical production, and there will be no antiquated patterns or tools to retard the march of progress.

Proposals for furnishing grain-cleaning machines of any desired capacity will be submitted on request. Catalogues of full line of machinery—the best in the world—will be ready soon.

Correspondence invited.

Respectfully,

**HOWES GRAIN CLEANER CO.**

**Silver Creek, N. Y.**



SEND ORDERS FOR

HARD  
SOFT  
BLOCK  
BLACK-  
SMITH**COAL  
COKE**Best Grades  
Best Prices  
Best DeliveriesTO MILES & COMPANY,  
MINE AGENTS AND SHIPPERS. PEORIA, ILL.**53 EARS 1 BUSHEL!**

Howard's World's Premium Corn.

"PRIDE OF SALINE" YELLOW DENT.

Send \$3.00 and receive 2 bushels; 1 bushel \$2.00. Pound ears, postpaid, 35c. Send for circulars.

H. HOWARD, MARSHALL, SALINE CO., MO.

**To POULTRY RAISERS.**

The Complete Poultry Manual is a neat little work which is well worth reading by those interested in poultry, or by boys or girls who want to turn an honest penny. The price is only 25 cents. Sent postpaid on receipt of price. Address

**MITCHELL BROS. CO.,**  
184 Dearborn Street, Chicago, Ill.**COMMISSION CARDS.**

[We will not knowingly publish the advertisement of a bucket-shop keeper or irresponsible dealer.]

**E. P. MUELLER,**  
Shipper of Wet Feed,

From Chicago, Milwaukee and La Crosse.

Particular attention paid to the shipments  
of mixed ear lots.

860 Calumet Bldg., 189 La Salle St., CHICAGO.

Will pay the highest prices for Wet and Dried Brewers' Grains, Dried Distillers' Slops, Starch Feed, Damaged Wheat, Hominy Feed and Barley Sprouts under yearly contracts  
Write for estimates F. O. B. cars your city.

**E. R. Ulrich & Son,**  
SHIPPERS OF  
**WESTERN GRAIN,**  
ESPECIALLY  
High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago &amp; Alton Ry., C. P. &amp; St. L. Ry., and St. L., C. &amp; St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building,  
SPRINGFIELD, ILLINOIS.

Write for Prices Delivered.

**COLLINS & Co.,**

STRICTLY COMMISSION

Grain, Hay and Mill Feed.

**CINCINNATI, OHIO.**

J. F. ZAHM. F. W. JAEGER. F. MAYER.

ESTABLISHED 1879.  
000**J. F. ZAHM & CO.,**  
Grain and Seeds,**TOLEDO, - - - OHIO.**

Send for our "RED LETTER." It'll keep you posted.

**SHIP YOUR GRAIN**

—TO—

**P. B. & C. C. MILES,**  
COMMISSION MERCHANTS,  
PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES  
QUICK RETURNS.

REFERENCES:—Commercial Nat. Bank, Peoria Savings, Loan &amp; Trust Co., Peoria.

**COMMISSION CARDS.**

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**J. J. Blackman & Co.,**

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WHEAT, CORN, OATS, BRAN, MIDDINGS, SCREENINGS, HAY  
SEEDS, BEANS, PEAS AND CORN GOODS.

95 Broad Street, Rooms 604 and 605, - NEW YORK

**Mohr-Holstein Commission Co.,**GRAIN AND PRODUCE  
COMMISSION MERCHANTS,

BARLEY, WHEAT AND SEEDS

SPECIALTIES.

Room 29, Chamber of Commerce

Milwaukee, Wis.

Branch Houses: Chicago and Minneapolis.

**F. H. PEAVEY & CO.,**

Minneapolis,

GRAIN RECEIVERS.

Consignments Solicited.

MILLING WHEAT A SPECIALTY.

**Martin D. Stevers & Co.**

Commission Merchants,

218 LA SALLE STREET, - CHICAGO.

We make a specialty of selling by sample

Barley, Wheat, Rye, Oats, Corn, Flax and Timothy Seed.

Grain, Seeds and Provisions for future delivery  
bought and sold on margins.

H. B. SHANKS.

Established 1873.

S. H. PHILLIPS.

**Shanks, Phillips & Co.,**

COMMISSION MERCHANTS,

HAY, CORN, OATS, BRAN, CHOPS, FLOUR AND CORN MEAL.

306 Front St., Memphis, Tenn.

Refer to Union and Planters' Bank. Cash advances on B. of L.

ACCOUNTS OF GRAIN DEALERS

OR ORDERS FOR

**Speculative Investments**

On the CHICAGO BOARD OF TRADE SOLICITED.

Call at our office or write for private Cipher Code or Shippers Grain Record.

**McLAIN BROS. & CO.,**

RIALTO BUILDING, CHICAGO.

W. F. JOHNSON.

F. J. SCHUYELER.

**W. F. JOHNSON & CO,**

Grain, Seed and Provision

**COMMISSION MERCHANTS**

Room 59 Board of Trade, CHICAGO.

Rooms 406-408 Corn Exchange, MINNEAPOLIS.

Room 317 Chamber of Commerce, ST. LOUIS.

Room 23 Chamber of Commerce, MILWAUKEE.

Address all Correspondence to and make all Drafts on Chicago.

LEMAN BARTLETT.

O. Z. BARTLETT.

**L. Bartlett & Son,**GRAIN AND PRODUCE  
COMMISSION MERCHANTS.**BARLEY A SPECIALTY.**Room 23 Chamber of Commerce Bldg.  
Milwaukee, Wis.

Careful attention given to orders from Brewers, Malsters and Millers.

**COMMISSION CARDS.****D. G. Stewart,**

GRAIN AND COMMISSION

Proprietor IRON CITY GRAIN ELEVATORS.

Capacity, 300,000 Bushels.

LIBERAL ADVANCES ON ALL CONSIGNMENTS.

CORRESPONDENCE SOLICITED.

OFFICE, 1019 Liberty Street, - PITTSBURGH, PA

ESTABLISHED 1871.

S. T. EDWARDS.

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**S. W. Edwards & Son,**

ESTABLISHED 1870.

HAY, GRAIN AND FEED,  
COMMISSION MERCHANTS.Office and Warehouse,  
110-120 N. Elizabeth Street, Chicago.REFERENCES: { Union National Bank, Chicago, and  
Bradstreet's Mercantile Agency.

We are members of the Board of Trade and have salesmen at the principal railroad yards.

ESTABLISHED 1879.

**LEDERER BROS.,****GRAIN and SEED**

Commission Merchants,

**BALTIMORE, - - MD**

We give careful attention to every shipment, are always prepared to make cash advances on consignments. We make a specialty of handling spot goods, which we either sell after arrival or hold if requested. We solicit your trade as we do a strictly commission business. REFERENCES: Merchants National Bank, Baltimore, Md., and the Commercial Agencies.

**Killpatrick, Lucas & Co.**

GRAIN AND HAY.

REFERENCES:

Girard National Bank, Phila.  
John Lucas & Co., Chicago.Advances on Bill Lading.  
Market reports furnished free  
Correspondence solicited.

Philadelphia, Pa.

**E. L. ROGERS & CO.,**ESTABLISHED  
1863.

COMMISSION

MERCHANTS,

GRAIN, Flour, Seed, Hay and Straw.

358 Bourse Building, PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports furnished gratuitously on application. Correspondence solicited.

References: { Corn Exchange National Bank.  
Manufacturers National Bank.  
Merchants National Bank.

Established 1868.

**S. W. FLOWER & CO.,****GRAIN AND SEED  
MERCHANTS. . .****TOLEDO, - - OHIO.**

High grades of Clover, Alsike and Timothy Seed a Specialty.

If you want to buy, sell or consign, please correspond with us.

WM. C. WALTON.

WATSON W. WALTON.

**WALTON BROS**Wholesale Dealers and  
Commission Merchants**Grain, Hay and Mill Feed.**

2131-2135 American Street, Philadelphia, Pa.



## COMMISSION CARDS.

GEO. N. REINHARDT &amp; CO.,

MELROSE STATION, NEW YORK CITY.



We sell on Commission and buy direct,

HAY, GRAIN AND FEED.

Storage capacity 8,000 bales, 30,000 bushels.  
Let us know what you have to offer.

## ROOFING AND SIDING.

STANDING SEAM STEEL, CORRUGATED IRON, METAL  
SHINGLES, FELT ROOFING.

ELEVATOR AND MILL IRON SIDING A SPECIALTY.

Kansas City Metal Roofing

and Corrugating Co.,

416 Delaware St., KANSAS CITY, MO.



DURABLE—EASILY APPLIED.

This roofing is manufactured from natural Trinidad asphalt materials, and will not dry up and become brittle under exposure to the weather as coal tar roofings do. Send for free sample of roof 12 years old, with circular and price list to

WARREN CHEMICAL &amp; MFG. CO.,

56 Fulton St., New York, U. S. A.

## Gutta Percha Roofing.

Absolutely fireproof paper sheathing—particularly adapted for elevators. Send for illustrated catalogue.

EMPIRE PAINT &amp; ROOFING CO., 221 N. 4th St., Philadelphia, Pa.

JAMES A. MILLER &amp; BRO.

129 and 131 South Clinton Street, CHICAGO.

Corrugated Iron Roofing and Siding

Material Only or put on Complete.

Special pains are taken to get out these materials so they can be cheaply put on and make a good job.

ROOFING  
SLATEJAS. L. FOOTE,  
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SLATINGTON, PA.

Write for New Slate Manual and Price List.

STEEL ROOFING AND SIDING.

Established 1872.

SCOTT &amp; CO.

75 East Front Street, CINCINNATI, OHIO.

FOR MILLS AND ELEVATORS.—We pay the freight.

Wire Edge. Lock Joint.

For Flour, Grist Mills and Elevators.

VERMIN PROOF.



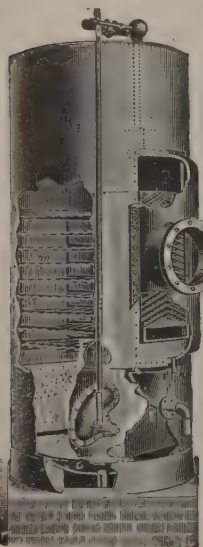
## DUST PROTECTOR.

The "Perfection" keeps poisonous dust out of the lungs. Of great value to everybody working in dust. Handiest and BEST APPEARING. Nickel Plated Protector. Postpaid, \$1. Circulars free. Agents wanted. Address H. S. COVER, South Bend, Ind.

## DUST! DUST!



Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust; invaluable in mills, elevators and every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel-plated protectors \$1, postpaid. Circulars free. Agents wanted.

Gibbs Respirator Co.,  
30-36 La Salle Street, - CHICAGO.STILWELL'S  
PATENT IMPROVED.

Lime Extracting Heater. Uses Exhaust Steam. Separates the oil from the Steam and Water. It regulates the Feed. The Pipes Never Pound. Prevents Scale in Steam Boilers. Removing all Impurities from the Water Before it Enters the Boiler.

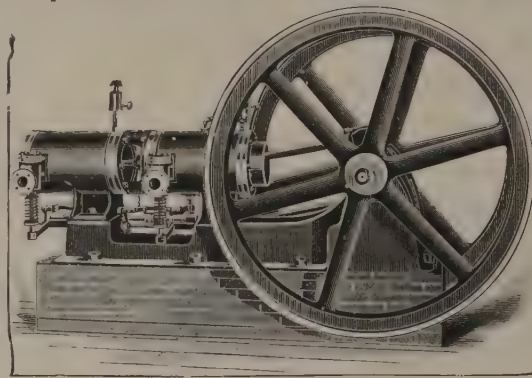
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Over 4,500

OF THEM  
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## GAS AND GASOLINE ENGINE.

The long-sought for found.



An impulse at every revolution, using the Old Reliable Four Cycle Principle. This is the only first-class up-to-date Gas Engine on the market.

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\$100 BICYCLE FREE. \$100

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Timothy, Clovers, Flax, Hungarian, Millets, Red Top, Blue Grass  
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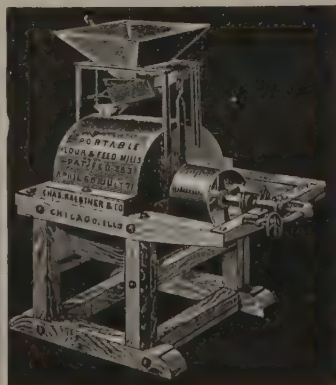
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CHICAGO, ILL. August 1, 1895.

MESSRS. CHARLES KAESTNER & CO.,  
Gentlemen:—Yours of the 30th received, and in reply would say that we have been using the Kaestner Mill for the past fifteen years. We think they are the best mill in the market. We have twelve of them in use at present. Yours truly, THE AMERICAN CEREAL CO.  
GEORGE STUART, Supt.

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Registers an accurate account of work done on any machine, grain tallies, fraction tallies, 4, 5 and 6 figures. Send for circular.

C. J. ROOT, Bristol, Conn.



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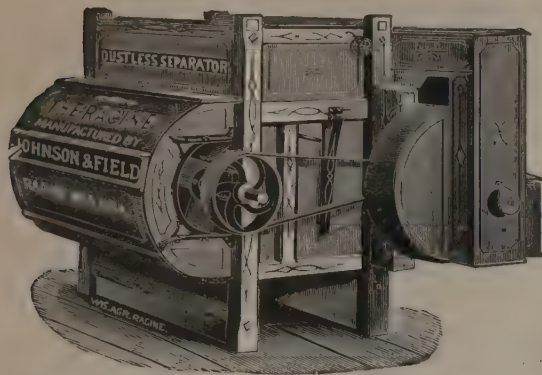
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FORELEVATING  
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## Embodies More Points of Excellence

Than any other machine offered for similar purposes, and is **Light Running, Large in Capacity, Perfect in Separation** and with **Great Strength and Durability**. These machines have no equal. Adopted and indorsed by many of the largest Mills and Elevators in the country.

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Is especially adapted for horse power use, is supplied with **Patent Governor Pulleys**, has an even and steady speed, is built extra heavy and bolted throughout. This machine has large capacity and is more durable than any other Warehouse Mill made.

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**Elevator Machinery and Supplies,**

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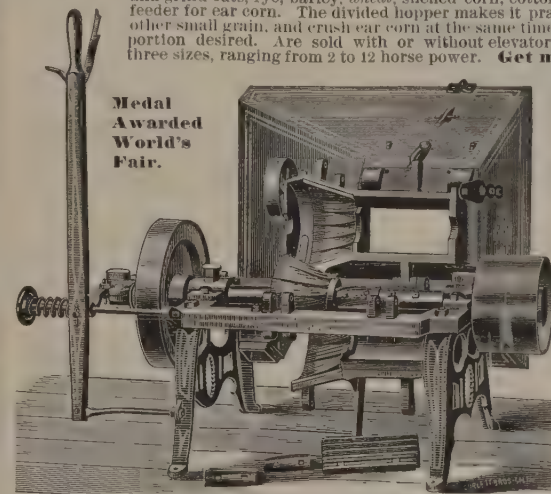
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MANUFACTURED BY  
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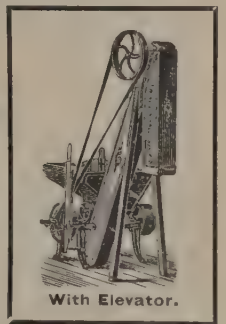
## THE BEST ALL-AROUND FEED MILL.

The conical burrs give large capacity with moderate power. Ahead of rolls or burrs in speed and quality of work for grinding all kinds of grain into first-class feed. Will crush corn and cob, and grind oats, rye, barley, wheat, shelled corn, cotton seed, oil cake, etc. Has self-feeder for ear corn. The divided hopper makes it practical to grind oats, wheat or other small grain, and crush ear corn at the same time, *mixing* the two in any proportion desired. Are sold with or without elevator attachment; and are made in three sizes, ranging from 2 to 12 horse power. **Get my circular.**



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Gold and Silver Watches, Bicycles, Tricycles, Guns and Pistols, Cars, Bicycles, Wagons, Carriages, Safes, Sleighs, Harness, Cart Taps, Skids,

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Improved Trucks,  
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Best Boiler Compound recipe, the right to manufacture and use, with instructions. Price..... \$1.00

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Prices for larger number given. Write for prices and circulars. Circulars free.

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ADDRESS **MITCHELL BROS. CO.,** 184 AND 186 DEARBORN STREET, CHICAGO, ILL.

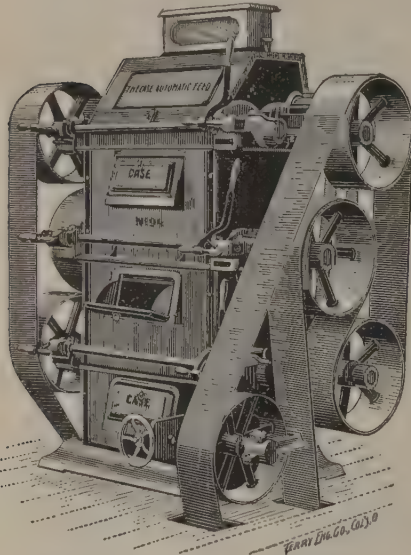


## Elevator Men,

Who put in a **ROLLER FEED MILL** last season, found it a profitable investment. Some Roller Feed Mills put in by elevator men have more than paid for themselves in one season. The demand for ground feed during the coming season promises to be even greater than during the last.

### The Case Three-Pair High Corn and Feed Roller Mills

Are made in four sizes, and always do perfect work.



ONTARIO, IND., April 8, 1895.

The Case Manufacturing Co.,  
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DEAR SIR:—We have the 9x18 Three-High roll running, and it is the best Feed Roll that I ever handled or saw. We can grind 60 to 65 bushels per hour with less than half the power that we used with the old stone.

She is a daisy. We have smiles all over our faces like a full moon. Now, if you want a statement regarding the roll, let me know, and will write you a good one. Everything all O. K.

Yours respectfully,  
M. S. MILLER.

We Keep a Full Line of  
**ELEVATOR AND MILL SUPPLIES  
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**CORN MEAL BOLTS.**

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*Now in Successful Operation  
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This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

It was on exhibition at the World's Columbian Exposition of 1893, and was awarded four highest medals and diplomas and received in addition thereto the highest indorsement of the principal officers of the Exposition as well as of the highest authorities in all industries to which it is applicable.

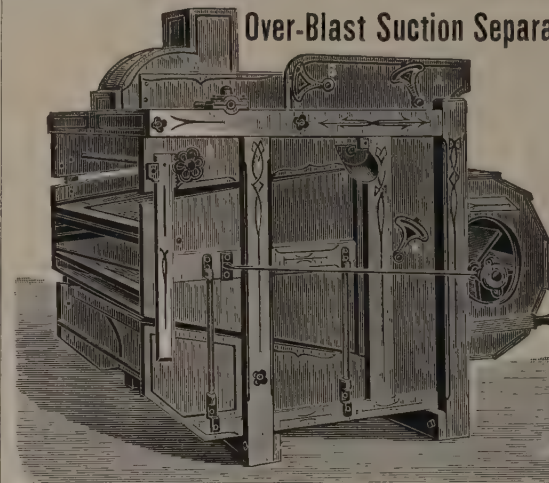
The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

The policy of the Company in regard to the introduction of its system is to make such liberal and easy terms with all who desire to use it that there will be no cause for complaint.

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## THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS.

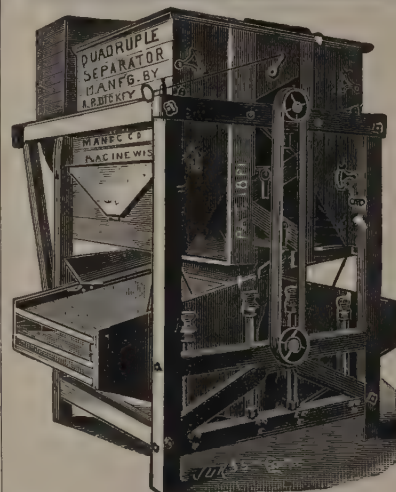


Over-Blast Suction Separator.

**THE  
STANDARD  
IN THEIR  
LINE.**

**"Grain  
Cleaned  
to a  
Standstill."**

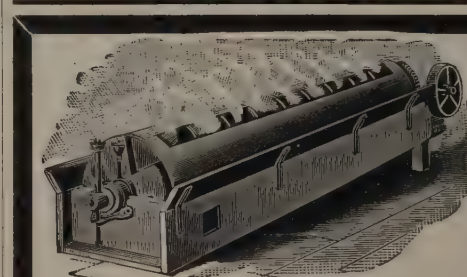
Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double End and Side Shake, and Dustless Separators, both Under and Over-Blast.



The Quadruple Suction Dustless Separator, Four separate suctions, independent of each other, with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

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**RACINE, WIS.**

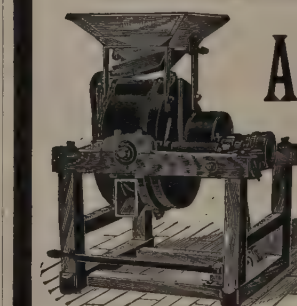


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For Cornmeal, Hominy, Buckwheat, Rice, and all kinds of Cereal Products; also Sand, Coal dust, etc.

Drying Cylinder made entirely of Iron. The machine has few parts and is not liable to get out of order. Automatic in its operation, requiring no attention. Double the capacity of any other Dryer sold for same price.

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The adjustment is positive and automatic, utilizing every part of the grinding surfaces. Can be started or stopped at pleasure, without stopping the power. Is dressed without taking the shaft out of its boxes, or the belt off the pulley.

**Comprises all Recent Improvements for  
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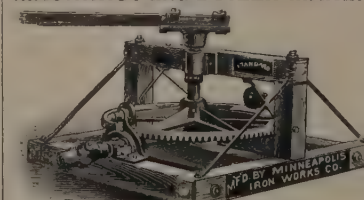
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This invaluable work has been issued under the endorsement and with co-operation of the Freight Departments of more than one hundred of the leading Railroad Systems throughout the United States. It contains the

### OFFICIAL, CORRECTED, REVISED AND COMPARED LISTS

Of Elevators, Flouring Mills, Grain Dealers and Shippers, Track Buyers and Sellers, Commission Houses, etc., etc., on the Following Leading Systems:

Lake Shore & Michigan Southern Railway.  
Chicago, Rock Island & Pacific Railway.  
Chicago, Milwaukee & St. Paul Railway.  
St. Louis, Iron Mountain & Southern Railway Co.

#### North-Western System:

Chicago & North-Western Railway.  
Chicago, St. Paul, Minneapolis & Omaha Line.  
Fremont, Elkhorn & Missouri Valley Line.  
Sioux City & Pacific Line.

Louisville, New Albany & Chicago Ry. (Monon).  
Baltimore & Ohio Railroad Co.  
Chicago & Eastern Illinois.  
Northern Pacific Railway.  
Illinois Central.

#### Burlington System:

Chicago, Burlington & Quincy Railroad.  
Chicago, Burlington & Northern Railroad.  
St. Louis, Keokuk & North-Western Railroad.  
Chicago, Burlington & Kansas City Railway.  
Hannibal & St. Joseph Railroad.  
Kansas City, St. Joseph & Council Bluffs Railroad.  
Burlington & Missouri River Railroad in Neb.

Cincinnati, Jackson & Mackinaw.  
Cincinnati, Hamilton & Dayton Railway Co.  
Missouri, Kansas & Texas Railway.

#### Grand Trunk System:

Chicago & Grand Trunk Railway.  
Cincinnati, Saginaw & Mackinaw Railroad.  
Michigan Air Line.  
Chicago, Detroit & Canada Grand Trunk Junc. Ry.  
Detroit, Grand Haven & Milwaukee Railway.  
Toledo, Saginaw & Muskegon Railway.

Boston & Maine Railway.  
Fitchburg Railroad Co.  
Maine Central Railway.  
New York & New England Railroad Co.  
Central Vermont Railroad.  
St. Paul & Duluth Railroad Co.  
The Baltimore & Ohio Southwestern Railway Co.  
New York, Ontario & Western Railway Co.  
Chicago & Alton Railway.  
Minneapolis, St. Paul & Sault Ste. Marie Ry.  
Union Pacific System.  
The Great Northern Railway Co.  
The Missouri Pacific Railway Co.

#### Erie System:

New York, Lake Erie & Western Railroad.  
New York, Pennsylvania & Ohio Railroad.  
Chicago & Erie Railroad.  
Buffalo & Southwestern.  
Tioga Railroad.

And many other leading railroads not enumerated hereon.

#### Pennsylvania System:

Pennsylvania Railroad Co.  
Pittsburgh, Ft. Wayne & Chicago Railway.  
Philadelphia, Wilmington & Baltimore R. R. Co.  
Washington Southern Railway Co.  
Baltimore & Potomac Railroad Co.  
Northern Central Railway Co.  
Camden & Atlantic Railroad Co.  
West Jersey Railroad Co.

#### Panhandle Route:

Pittsburg, Cincinnati, Chicago & St. Louis Ry. Co.  
Indianapolis & Vincennes Railroad Co.  
Cincinnati & Muskingum Valley Railway.

Allegheny Valley Railroad.  
Cumberland Valley Railroad.  
New York, Philadelphia & Norfolk Railroad Co.

Michigan Central R. R.  
C. C. C. & St. L. Railway (Big Four).  
Louisville & Nashville Railroad.  
Nashville, Chattanooga & St. Louis Ry.  
Chicago & West Michigan Railroad.  
Detroit, Lansing & Northern Ry.  
Mobile & Ohio Railway.  
Peoria, Decatur & Evansville Railroad.  
Toledo, Ann Arbor & North Michigan Ry.

The lists for this great work have been collected, arranged and compiled by the above roads and are brought down to date. In the judgment of the leading grain merchants and millers it is the best work of the kind ever published. Besides over 100 of the official railroad lists it contains the Grain Inspection Rules of the leading Boards of Trade, including Minneapolis, Philadelphia, Milwaukee, St. Louis, Detroit, Chicago, Cincinnati, Toledo, etc., etc., the list of officers of the leading Boards of Trade and other information of interest and profit to proprietors of elevators, flour mill owners, grain dealers and shippers, commission houses and track buyers, and concerns who desire to reach this class of customers.

The official lists of the grain dealers, shippers, flouring mills, elevators and commission houses of any one of the twenty-seven of the principal cities is ALONE WORTH MANY TIMES THIS SMALL OUTLAY, and this is the only work which contains these lists, and they are correct and revised to date, besides the thousands and thousands of places all over the country wherever grain is bought or sold.

Remember this great work will be sent immediately on receipt of price, express fully prepaid, provided they have not all been sold, in which case your remittance will be returned immediately.

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RAILROAD WORK AND HEAVY STRUCTURES,  
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200,000-bushel Elevator for the Geo. P. Plant Milling Co., St. Louis, Mo.

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Two Freight Warehouses, each 115 x 625 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.  
Eighty Cotton Warehouses, 62 x 98 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.

### RIVER AND HARBOR:

Dock and Warehouse, 225 x 1,500 feet for the New Orleans & Western R. R. Co., Port Chalmette, La.

### MISCELLANEOUS:

85,000 Spindle Mill, for the Berkshire Cotton Mfg. Co., North Adams, Mass.  
15,000 Spindle Mill, for the Home Cotton Mills Co., St. Louis, Mo.  
Warehouse for the Bemis Bros. Bag Co., St. Louis, Mo.  
10,000-bushel Distillery, the largest in the world, for the Indiana Distilling Co., Terre Haute, Ind.  
Two Cotton Warehouses, each 200 x 250 feet, for the Pelzer Mfg. Co., Pelzer, S. C.  
Cattle Barns, capacity 2,500 head, for the Indiana Distilling Co., Terre Haute, Ind.

500,000-bushel Storage Elevator for the Riverside Malt & Elevator Co., Riverside, Cincinnati, O.  
150,000-bushel Elevator for the Indiana Distilling Co., Terre Haute, Ind.

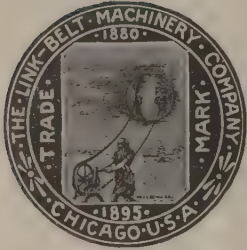
Cotton Compress Warehouse, 108 x 810 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.  
Freight Station for the Baltimore & Ohio Southwestern R'y Co., Brighton, Cincinnati, Ohio.

Foundations for the large Train Shed, for the New York Central & Hudson River R. R. Co., at Syracuse, N. Y.  
25,000 Spindle Mill, for the Dwight Mfg. Co., Alabama City, Ala.  
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Six-story Office Building, for J. W. Warner, Syracuse, N. Y.  
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Rope Dressing, Grain Trippers,  
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Wagon Dumps, Elevators and Conveyors, etc.

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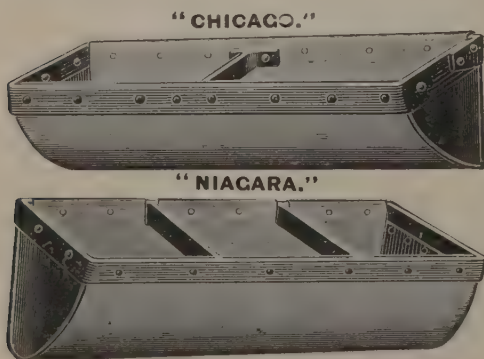
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SUPPLIES.

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## GRAIN ELEVATORS, MALT HOUSES

And all Kinds of Heavy Construction.

Patent System of Independent  
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Patent Double-Jointed  
Distributing Spouts.

Patent Automatic  
Grain Belt Tripper.



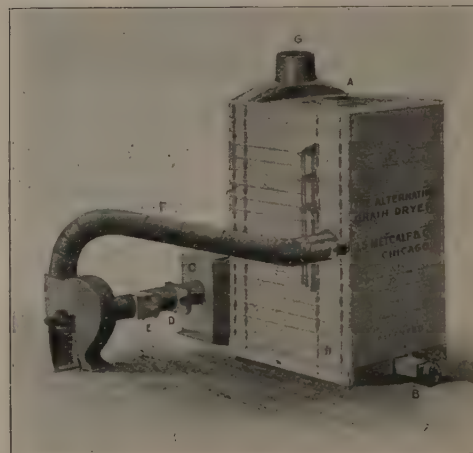
313 Third Street South, Minneapolis, Minn.

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## A PERFECT GRAIN DRYER.

Wet or Damaged Grain Restored to Grade.



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profit.

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what  
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claim.

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MARINE,  
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Warehouse and Salesrooms, KANSAS CITY, MO., 1221-1223 Union Ave.  
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## THE B. S. CONSTANT COMPANY,

Designer and Builder of

## GRAIN ELEVATORS.

MANUFACTURER OF

Grain Cleaning Machinery  
FOR ELEVATORS AND MILLS.

Seed and Farm Fanning Mills.

Automatic Self-Feeding Ear Corn Elevator Boot and Sheller Feeder.

Our Elevator Cleaner collects all dust at the head of the elevator before the grain reaches the bins. It also removes the loose silk, shucks and snow out of ear corn and conveys it to the dust room.

Correspondence  
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S. W. Cor. Douglas and Prairie Sts., Bloomington, Ill.

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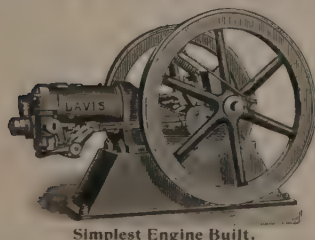
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Pronounced by experts the most scientific in principle. Hundreds of testimonials. Easily operated by any unskilled person; a steady, even power; gasoline direct from the tank.

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Any Capacity.

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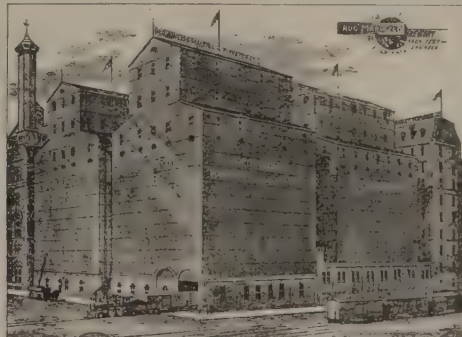
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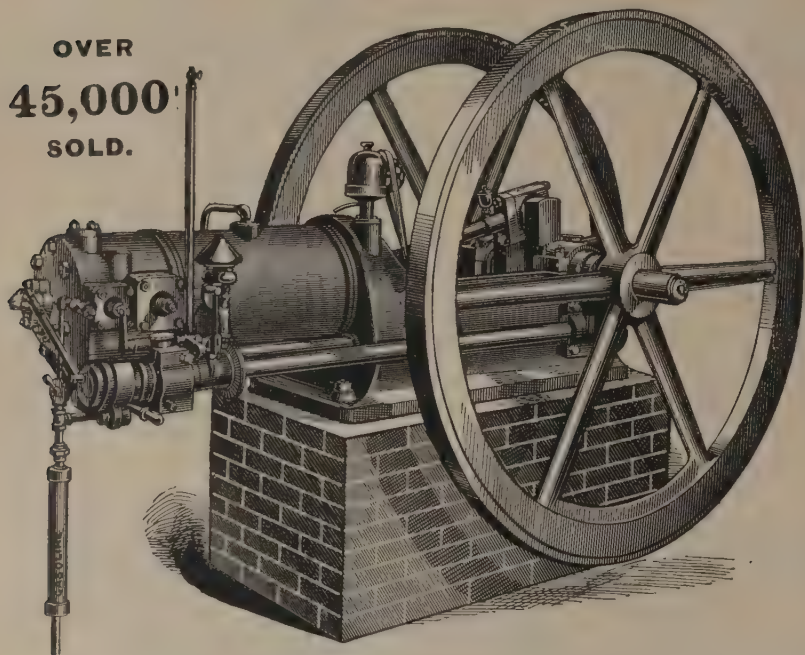
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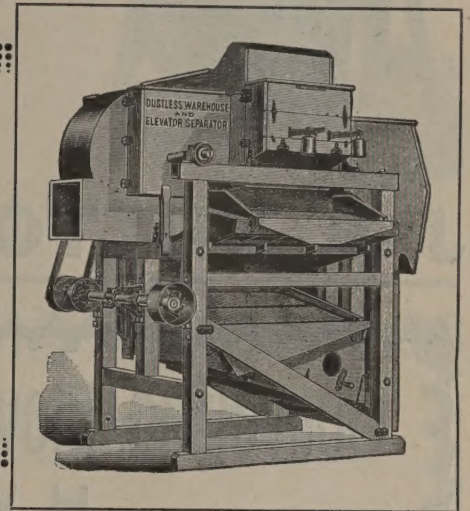
PUBLISHERS,

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# GRAIN CLEANING.

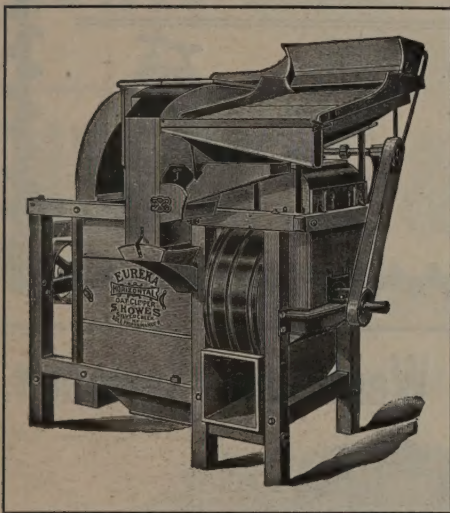
## *Warehouse and \* Elevator Separators.*



If you want the best Warehouse and Elevator Separator built, send for circular of our machine, with new and perfect driving attachments.

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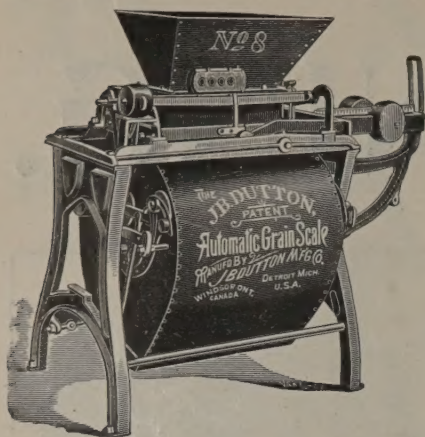
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SPECIALTIES FOR MILLS AND GRAIN  
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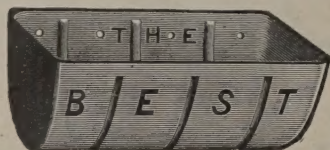
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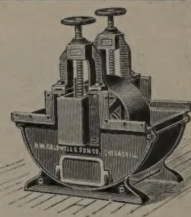


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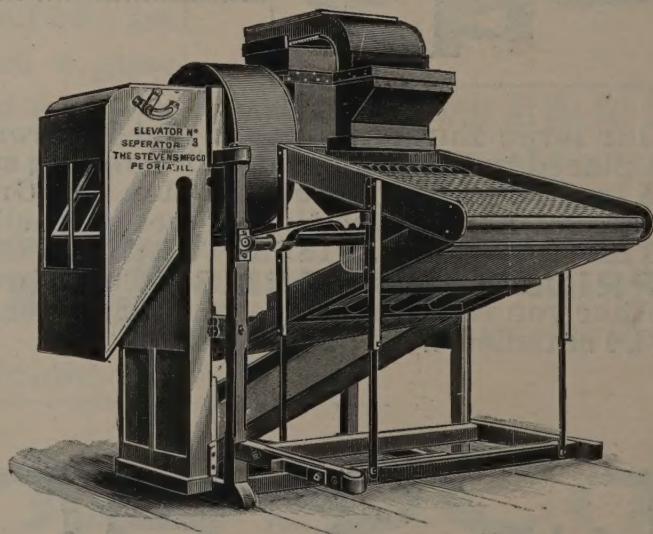
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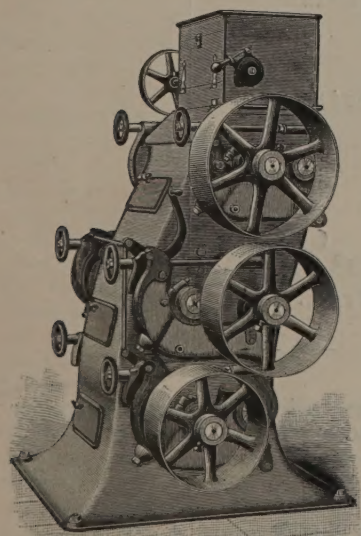
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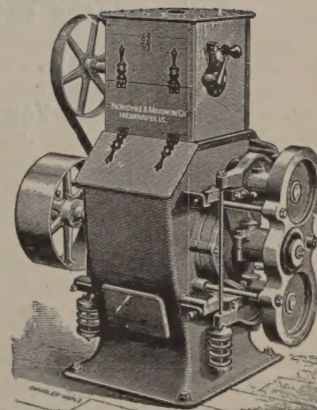


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Dec. by E.S.W.

MINNEAPOLIS, MINN.

Feb. 18, 1896.

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